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# Monthly Cyclopedia and Medical Bulletin

(CONSOLIDATED)

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## NEWS AND THERAPEUTIC HINTS.

### Persistent Hiccough.

F. H. Read reports the relief of persistent hiccough by the use of 10 drops of a saturated solution of menthol in rectified spirits of wine, in a little hot water, to be repeated every hour if necessary. (Critic and Guide.)

### Bedsores.

Mosny and Pruvost (Bulletins et Mémoires de la Société médicale des Hôpitaux de Paris) mention a case of a young man suffering from bronchopneumonia, and phlebitis of both lower extremities in whom, after partial recovery from these disturbances, a large suppurating bedsore developed and the temperature, previously normal, rose a second time. The sore continued to enlarge, in spite of the usual measures of treatment, until it attained the size of a silver dollar, when applications of hot air—as hot as the patient could stand—were begun. Even at the first sitting, of fifteen minutes' duration, the necrotic base of the ulcer began to redden, and soon after showed a tendency to granulate. The temperature, previously rising, remained stationary for two days, then began to descend, and by the thirteenth day was normal. Seven hot-air applications in all were made, at intervals of two to four days, and on the twentieth day the ulcer was healed. That the hot-air treatment was alone responsible was shown in that, during the intervals between applications, the sore had been merely covered with dry dressings.

Achard, discussing the case just referred to, stated that he had obtained good results with hot air in the treatment of gangrenous ulcers, *e.g.*, in a case of diabetes, as well as in one of Pott's disease with paraplegia. While in the latter case, owing to the trophic nature of the ulcer, the hot air failed to induce healing, it exerted a rapid detergent effect upon the lesion, arresting suppuration and fetor. (Charlotte Med. Jour.)

### To Estimate the Solids in Urine.

In order to estimate the number of grains of solids passed each two hours, measure accurately the number of ounces of urine passed during this period, record same and estimate by Haines's modification of Haeser's rule. Multiply the last two figures of the specific gravity of the urine by number of ounces voided in twenty-four hours, and add 10 per cent. to the product. (Med. Summary.)


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## NEWS AND THERAPEUTIC HINTS.

### Surviving Superstition Among the Laity.

Physicians almost daily come across curious superstitions among their patients in regard to medical things which seem to belong to a less enlightened age. They are not always found among the ignorant and uneducated, but often among people of some education and otherwise fairly intelligent. The mental fog or obliquity signified may account in a measure for the vogue of cults and quacks. The Weekly Bulletin of the New York City Health Department sets forth some of these traditions and superstitions, racial, religious, and otherwise, as encountered by the inspectors and nurses when urging parents to have various physical defects found among school children treated or corrected. When glasses are suggested for defective vision they are told that eye-glasses are a luxury, that they make the child look old, that they are worn for style, that the child will get used to them, that they will become a habit and the eyes will become weaker, or that they will interfere with the matrimonial chances of the daughter. Objection to the treatment of an ear that has a discharge may be based on the statement that the discharge allows the poison to escape and thus purifies the blood, or that at home the child hears too much anyway. If the parents are urged to have tonsils and adenoids removed it will be said that God put them there and, if removed, the throat will be too wide, the air will rush into the lungs and cause inflammation; that the removal of the tonsils will interfere with speech, the singing voice, or the procreative power, or that the children will become nervous and depressed, possibly with suicidal tendencies. Among the colored population voodooism is said to be frequent, for the attempt is made to cure diseases of the skin and eyes by the use of yarns of various colors. Suggestion that hair matted by dirt and lice be cut brings the protest that cutting the hair will prevent the growth and diminish the strength of the child. Pulling the teeth, it is said, will cause sore eyes; it is bad luck for any poor child to have gold or silver in the mouth. The "evil eye" is guarded against in some sections by the mother hastily licking the child's eyes and face, expectorating as she does so, or by sewing salt in the child's shirt, or tying red ribbon around the wrist or neck. Weakness of memory is attributed to eating the ends of the bread loaves, and bed-wetting is ascribed to playing with fire or matches before going to bed. (Jour. Amer. Med. Assoc.)

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## NEWS AND THERAPEUTIC HINTS.

### Anorexia.

For loss of appetite the following mixture has been found of distinct value:—

℞ Tincture of gentian,
Tincture of quassia,
Tincture of calumba,
Tincture of anise, of each, f3i¼.

The dose is 20 to 40 drops in a quarter of a glass of water, twenty minutes before meals. (Medical Brief.)

### Cracked Nipples.

The following treatment is suggested for cracked and painful nipples. Wash after each nursing with alcohol and water, 10 to 20 per cent., then apply the following:—

℞ Balsam of Peru, gr. xl.
Tincture of arnica, ♏xl.
Lime water, f3iv.
Almond oil (sterile), f3j.

In lieu of this a mixture of equal parts of tincture of benzoin and tincture of tolu may be applied. (Med. Standard.)

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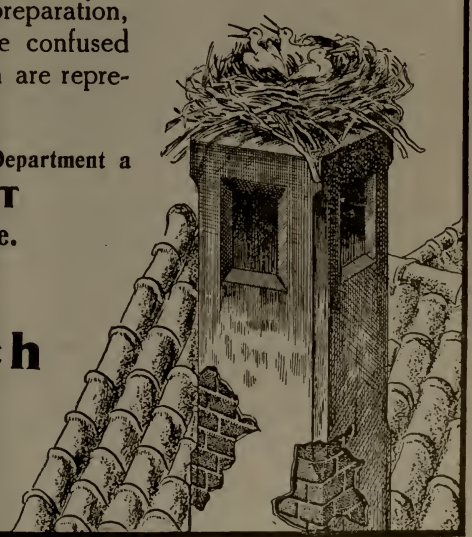

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## NEWS AND THERAPEUTIC HINTS.

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Camphoræ pulveris, ℥iij (90 Gm.).

Solve.

This is to be painted repeatedly over the affected surface in phlegmonous and especially in gangrenous erysipelas. (N. Y. Med. Jour.)

### X-ray Burns.

Dr. Engman recommends that in X-ray burns lanolin be applied for twenty-four hours and then the following ointment:—

℞ Amyli,
Zinci oxidi,
Bismuthi subnitratis, āā ℥j.
Acidi borici,
Aquæ rosæ, āā ℥iss.
Olei olivæ,
Lanolini,
Liquoris calcis, āā ℥iij.

(Critic and Guide.)

### Gelatin as a Hemostatic.

The action of gelatin in favoring the coagulation of the blood has long been known. It has been employed subcutaneously and intravenously in internal hemorrhage, in hemophilia, in purpura, in the hemoptyses of tuberculosis, and in the various hematemeses. The best results have been obtained apparently in the treatment of aneurism, chiefly of the aorta. The formula for the "gelatinized serum" is as follows:—

℞ Sterile gelatin, 10 Gm.
Sodium chloride, 7 Gm.
Distilled water, 1000 c.c.

The solution should not be acid. The possible presence of tetanus spores in commercial gelatin demands rigid sterilization. The gelatinized serum should be kept at 110° C. for at least a half-hour. It may be administered in doses of from 20 to 200 c.c. per day. The liquid should be injected at 37° C. into the subcutaneous tissue of the thigh or abdomen. The intravenous route is rarely employed. Gelatin has been injected directly into the cavities of aneurisms, in some instances with good results. (Med. Rec.)

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## NEWS AND THERAPEUTIC HINTS.

### Lotion for Use in Urticaria.

Bouchard employs the following:—

℞ Cocaine hydrochloride,
Chloral hydrate,
Resorcin, of each, 2 Gm.
Glycerin, 6 c.c.
Alcohol, 40 c.c.
Cherry-laurel water, 60 c.c.
Distilled water, 90 c.c.

(Med. Record.)

### Gasoline as a Therapeutic Agent.

Stephens enumerates many uses to which ordinary motor spirit may be put. In pediculosis capitis, it is the remedy *par excellence*, not only terminating the life of the parasite, but having a good solvent action on the nits as well. As a scalp cleanser it is most valuable; in alopecia areata it has proved useful; in ringworm and in scabies it succeeds where other remedies have failed. Its great penetrating powers, together with its solvent properties, make it useful in many skin affections. Burns of all kinds, and especially those produced by the spluttering of hot metal at steel, copper, or spelter works, are greatly benefited by the early application of gasoline. At the author's suggestion, several of the works in his district have a quantity of gasoline ready at hand in a spray, whence it is blown on to the wounds, which are then covered with a dusting powder of iodoform, salicylic acid, and boric acid. Its application by means of a spray tends to the cleanliness of the method, which, in the case of cuts, is of especial value, as it allows of the stitches being put in at the surgery without any further preparation. The value of gasoline in burns is, in the author's opinion, due to the fact that it destroys all germs that have been conveyed from the filthy clothes to the wound, and at the same time interferes with the broken-down, half-burnt skin cells, from which enzymes have been set free. These enzymes, being closely related to ptomaines, are undoubtedly responsible for the poisoning which always takes place in metallic burns, whereby the process of healing is prolonged for weeks. The author adds the necessary word of warning as to the inflammability of this substance. (Dublin Journal of Medical Science.)

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## NEWS AND THERAPEUTIC HINTS.

### Endometritis.

℞ Ichthyolis, f3j.
Tr. iodi, f3iij.
Glyceriti hydrastis, f3v.
Glyceriti boroglycerini, f3vj.

M. Sig.: Apply on tampons. (Med. Sentinel.)

### Hypodermic Medication of Anemia.

Iron citrate, gr. 5/6 (0.05 Gm.).
Sodium arsenate, gr. 1/6 (0.001 Gm.).
Strychnine sulphate, gr. 1/120 (0.0005 Gm.).
Sterile distilled water, a sufficient quantity.

This is put up in a sterile ampoule and given once or twice daily as the case requires. The site of injection is the thigh. (M. K. Robbie, in Merck's Archives.)

### Pinworms.

For pinworms Mossé recommends injections of cold salt water several times daily, with suppositories containing the following:—

℞ Mercurial ointment, gr. iv.
Benzoinated lard,
White wax, of each, gr. viij.
Cacao butter, 3ss.

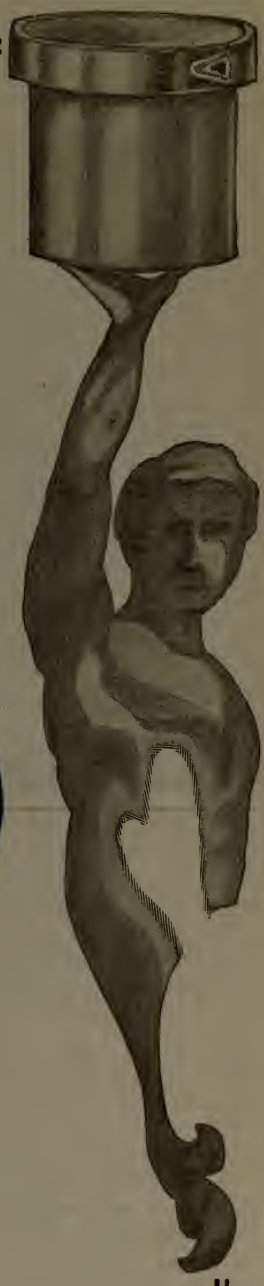
(Med. Standard.)

### Sterilization of Catgut.

Catgut cannot be sterilized in the usual way by heating in a current of steam or in an autoclave, because heat, especially in the presence of moisture, destroys the catgut. Debouchy, therefore, recommends preparing sterile catgut with the aid of iodine or silver nitrate. He proceeds as follows: The catgut is first deprived of its impurities and of its fat, then allowed to remain in a 10 per cent. iodine solution in acetone for two to twenty-four hours, according to the thickness of the cord, and washed with pure acetone. The catgut is preserved in a sterile mixture of glycerin and alcohol. When silver nitrate is used for sterilizing, the following process is applied: The catgut is allowed to remain for two weeks in a 2 per cent. solution of silver nitrate, is then washed with diluted sodium chloride solution and finally with distilled water. After allowing the catgut to remain for two days in 25 per cent. spirit of cinnamon, it is washed with distilled water, and preserved in a sterilized mixture of alcohol and glycerin. (Jour. pharm. chim.)

### Functional Kidney Test.

M. Fishbein, Chicago, advocates the use of the phenolsulphonephthalein test of the functional ability of the kidney which has been made on many hundred cases, and in over 40, at least, post-mortem examinations have confirmed the presence of conditions suggested by the test results. A number of cases are reported with tabulated results in scarlet fever cases. He says there seems to be a general lowering of the renal function in the later stages of scarlet fever. The tests were made by intramuscular injections of the agent and in nearly all the uncomplicated cases examined from the third to the fifth week of the disease. An average total output of 55 per cent. of the drug excreted in the urine was seen as compared with the normal 65 to 85 per cent. In 3 cases of acute nephritis an increased output was observed in 2 and a lowered output in 1. In several instances in which headache and nausea occurred without albumin in the urine, a test showed decreased function of the kidney. Its practical value is apparent. (Jour. Amer. Med. Assoc.)



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## NEWS AND THERAPEUTIC HINTS.

### Epididymitis.

℞ Ichthyolis, f℥vj.
Ung. hydrargyri,
Ung. belladonnæ, āā ℥iv.
Cerati plumbi subacetatis, q. s. ad ℥ij.

M. Sig.: Apply to scrotum freely twice or thrice daily, and support with large suspensory bandage. (Merck's Archives.)

### Tropical Areas Free from Malaria.

Notwithstanding the almost universal presence of mosquitoes in tropical countries, certain areas have been found to be free from malaria, even when the anophelines are found. Major Brooke, of the United States Army, in an article in the Military Surgeon of March, 1914, reports that Cebu in the Philippines is free from malaria although the anopheline mosquito has been found in Cebu and it is surrounded by the zones in which malaria is epidemic. Major Brooke says that it has been reported by Ludlow that there are no malarial mosquitoes in Cebu; but Brooke personally has found specimens of the genus *Myzomyia*. This variety of mosquito has been found to harbor the malarial parasite in certain stages of its development, but it has been found not to transmit malaria because it is believed that the development of the parasite is never complete. Brooke refers to the suggestion of Manson that there are some places free from malaria and yet surrounded by epidemic zones, as in the case of Cebu, because in that particular area food conditions for the mosquito may exist which are inimical to the growth of parasites in their bodies. (Jour. Amer. Med. Assoc.)

### Pruritus Ani.

Nocturnal pruritus ani is often prevented, even cured, by inserting a fair-sized hard-rubber or metal dilator into the anus for about fifteen minutes at bedtime. (American Journal of Surgery.)

### Atrophic Rhinitis.

℞ Red iodide of mercury, gr. xv.
Potassium iodide, gr. xxxiv.
Distilled water, f℥iii⅓.

M. Sig.: Poison; use only in spray; do not swallow. (Journal of Ophthalmology and Laryngology.)

## NEWS AND THERAPEUTIC HINTS.

### Genital Herpes.

Queyrat, in Paris médical, is credited with the following ointment to be employed in this affection:—

℞ Mentholis,
Guaiacolis, āā gr. iij.
Zinci oxidi, 3ss.
Unguenti aquæ rosæ (recentis), 3v.
M. et ft. unguentum. (N. Y. Med. Jour.)

### Pains of Death.

A curious correspondence has been going on in the Times on the subject of "The Pains of Death." Of course, that dying is a painful process is a popular and not a medical belief. The difficult breathing often present in the dying suggests to the anxious friends a struggle which must be painful. They overlook the fact that the accompanying asphyxia produces stupor which ends in coma. Several lay correspondents have written to the Times stating the experiences of friends who reached an advanced stage of asphyxia and yet recovered to assure them that they suffered no pain. One eminent member of the profession, Sir Henry Morris, ex-president of the Royal College of Surgeons, has made a very practical suggestion which, though not new, is not so well known as it should be. He points out how easy it is to relieve the difficult breathing witnessed in many conditions, such as heart-failure, apoplexy, compression of the brain, cancer causing fixation of the chest wall or involving the glands of the neck, drowning, some cases of chloroform poisoning, and regurgitation of some of the contents of the stomach in persons unconscious. The noisy snoring or stertorous breathing in these conditions is the immediate result of a local mechanical condition—palsy of the short palate, falling back of the tongue over the top of the pharynx, or the presence of mucus or other fluids in the larger air tubes. This condition may be changed, to the great relief of the distressed friends, and sometimes to permanent recovery, by turning and keeping the patient on one side; when paralysis exists the paralyzed side should be downward. The lateral posture permits the tongue to come forward and to one side. If the chin is dropped it should be held up. The lateral posture also allows mucus or other fluids to escape between the lips as well as to gravitate into and fill up the lower lung, to the great relief of the upper lung, whereby quiet respiration can be carried on. The lung is not permanently injured by remaining inactive and filled with mucus or water for a considerable period, but there is great danger in reversing the sides and thus allowing the fluid to cross from one lung to the other. Sir Henry Morris thinks that in some cases of apoplexy patients have died by suffocation from being kept on their backs rather than from the damage to the brain, and that, had they been placed and kept on the paralyzed side and respiration been thus facilitated, the brain injury would have had time to become repaired and the patients might have recovered. These facts were first pointed out in a communication to the Royal Medical and Chirurgical Society by the late Dr. Robert L. Bowles, and were published in the Transactions of the society in 1860. (Jour. Amer. Med. Assoc.)

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## NEWS AND THERAPEUTIC HINTS.

### CHANCROIDS.

The following dressing is recommended by J. W. Moore, of Philadelphia:—

℞ Hydrargyri chloridi corrosivi, gr. 1/6.
Zinci sulphatis, gr. ix.
Acidi borici, f3j.
Glycerini, f3j.
Aquæ, f3vj.

M. et ft. solutio. (Merck's Archives.)

### MALARIAL CACHEXIA.

℞ Euquinine, gr. lxxv.
Ferri et potassii tartratis, 3ij.
Sodii arsenatis, gr. j.
Glycerini, f3iss.
Aquæ destillatæ, q. s. ad f3viij.

M. Sig.: Two to four teaspoonfuls daily. (Each teaspoonful contains about 1¼ grains euquinine, 1/64 grain sodium arsenate, and 2 grains iron.) (Concetti, in Merck's Archives.)

### GOUTY MIGRAINE.

The following prescription was recommended by Debout:—

℞ Extract of colchicum,
Quinine sulphate, of each, gr. xlv.
Powdered digitalis, gr. xxiv.

This is to be divided into 30 pills, one of which is to be taken every evening. (Bulletin général de thérapeutique.)

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YOU will do us a favor, Doctor, if you will report to us any case coming under your observation in which it *seems* the drinking of Coca-Cola has produced injurious effects or has formed a "habit." We use "habit" in the medical sense. We ask this because, though gossip of such cases has reached our ears from the rank and file of the laity under the caption "I heard of such and such a case," we have never yet been able to find an actual, well authenticated *human* case and have never yet had such a case brought before us or vouched for by a responsible and reputable physician.

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¶ We want to hear about them from you if you have *apparently* found them.

¶ If you have not—and we are confident you have not—we would appreciate and treat confidentially a word from you to that effect.

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## NEWS AND THERAPEUTIC HINTS.

### Chlorosis.

Albert Robin points out that one of the primary indications in this condition is to check the excessive functional activity of the stomach. This is accomplished by the administration of extract of belladonna before meals, and of antacids after meals. The malnutrition is combated with the aid of arsenic administered per rectum or subcutaneously. In the former case the following solution is used:—

℞ Fowler's solution, 6 c.c.
Distilled water, 94 c.c.

Of this, 5 c.c. are injected into the rectum every morning, following a cleansing enema. For hypodermic use 5 cg. daily for eight days, with an intermission of four days, followed by a second series of injections.

Of the preparations of iron Robin prefers the iron and potassium tartrate and the reduced iron, the latter being especially indicated in cases in which a rapid effect is desired. If there is gastric irritability lactate of iron is given. Chloride of iron produces the best results in cases in which there is a hemorrhagic tendency. (Bulletin général de thérapeutique.)


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## NEWS AND THERAPEUTIC HINTS.

### Medicine in the Italian Parliament.

In the recent general elections held in Italy a remarkable number of physicians and surgeons, in consultant or in general practice, entered the field. Significant is the fact that it is precisely in those regions of the kingdom where the sick rate and mortality are highest, and where physical degeneracy is most pronounced, that the medical candidatures in question were most numerous and most actively promoted. Southern Italy, notably the Neapolitan provinces and Calabria, are the regions indicated, no fewer than five medical candidates courting as many of their constituencies. Some of these gentlemen hold university chairs, besides being in consultant practice, and the question arises: How can they possibly find time to do justice to their pupils or their patients, on the one hand, or to their constituents, on the other? The answer is that the Chamber of Deputies in Rome does not commence business till late in the afternoon, seldom before 3 P.M., and its business is invariably over between 6 and 7. As a matter of fact, there have been many physicians and surgeons in the Italian Chamber who have combined the two rôles of practitioner and parliamentarian. Lanza, a Piedmontese consultant, honorably refused all official salary as Prime Minister on the ground that his professional honoraria sufficed for all his wants, while he found time not only to earn the said honoraria, but to lead up to the events which brought his illustrious client King Victor Emmanuel in 1870 to Rome. Guido Baccelli is another of the consultants who hold a university chair and a seat in Parliament with conspicuous efficiency in both capacities. The eminent patriot and sanitary reformer, Agostino Bertani, surgeon-general in Garibaldi's revolutionary force, is yet another exemplar of the compatibility of the medical with the political career; while as to the senators who have been promoted from the Lower to the Upper House while keeping in touch as teachers and practitioners with medical science and practice their name is legion. Italy has everything to gain by the presence in her legislature of public-spirited consultants and practitioners, who, with no ambition for office, are yet prepared to give their thought and experience to the body politic, claiming, as that body does, a serious and a systematic rehabilitation, in the sanitary sense, to which no Italian with any proper sense of citizenship can now remain indifferent. (Lancet.)

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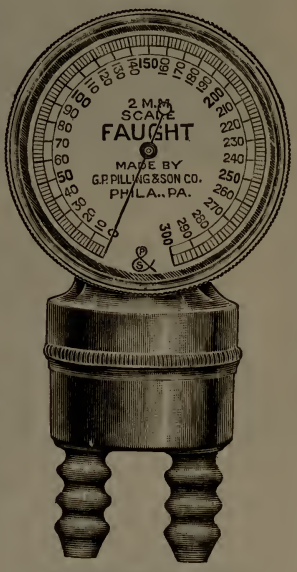


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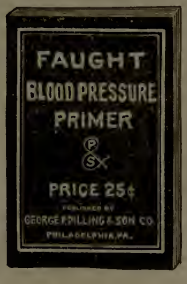


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## NEWS AND THERAPEUTIC HINTS.

### Causes of Fatigue.

Dr. William Stirling, professor of physiology in the University of Manchester, recently delivered an address on "Health, Fatigue, and Repose." Most of the breakdowns in man's life were due to himself, because of ignorance, recklessness, or both. Overwork, without sufficient repair of an organ, whether brain or eye, digestive organs or muscles, was the primary cause of fatigue. All the organs of the body could not run at full speed at the same time. Mental fatigue greatly impaired bodily activity, and physical or muscular fatigue had a distinct effect on brain activity. The observations of Dr. Leonard Hill on the effects of a liberal supply of oxygen in fatigue were most important. Somnolence in churches and chapels seemed on occasion to occur at sermon-time, but it was not in all cases to be attributed to the sermon. The explanation lay rather in the badly ventilated atmosphere, and in the fact that Sunday, though the first day of the week, was to most churchgoers the close of the week. The fatigue problem was all-important to both the teacher and the child at school. It was well known that certain school subjects produced fatigue sooner than others. The following represented the order of subjects arranged according to difficulty: mathematics (standard), 100; Latin, 91; Greek, 90; gymnastics, 90; history and geography, 85; French and German, 82; natural history, 80, and drawing and religion, each 77. The energy of our nerve-cells and our muscles exhibited rhythmic variations in the course of the day. In each case they were most energetic between 10 and 11 in the morning, and these periods should be selected for the lesson that was apt to cause most brain fatigue. As to the causes of fatigue, the view that the chemical substances in the muscle or in the blood were used up more rapidly than they were replaced was substantially true. That muscular fatigue was partly a chemical process was shown by the fact that, if an extract were made from the muscles of an animal that had been fatigued and injected into the muscles of a fresh animal, the muscles of the fresh animal showed phenomena which could not be distinguished from those of fatigue. If the blood-vessels of a fatigued muscle were washed with oxygenated water containing a little common salt—a liquid which had no nutritive properties—the waste-products were re-

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## NEWS AND THERAPEUTIC HINTS.

moved. Nothing that could yield energy to the muscles was added, yet the muscle retained its activity. (Jour. Amer. Med. Assoc.)

### Care of Clinical Thermometer.

In a letter to the Journal of the American Medical Association Dr. W. H. Wells suggests keeping a piece of cotton saturated with pure carbolic acid in the thermometer case as a preventive of infection. (Jour. Amer. Med. Assoc.)

### Fate of Cocaine in Body.

Some of the prevailing conclusions in regard to the behavior of cocaine appear to be in need of amendment in the light of up-to-date information. When it was first reported that subcutaneous administration of this alkaloid was not followed by its reappearance in the urine, this find, taken in connection with some observations of a different type, made it seem plausible to assume that cocaine may be destroyed in large measure by contact with animal tissues. As a matter of fact, newer experiments conducted in the Pharmacologic Institute of the University of Berlin bring evidence that cocaine may actually be excreted in decidedly large proportions by the kidneys. At first, in any period of frequent administration of the alkaloid, a tendency toward cumulative manifestations may arise, but the proportionate daily output increases with the use of the drug. According to these newest studies of Rifatwachdani, even prolonged contact with living tissues does not appear to induce a destruction of cocaine. For the closely related derivative ecgonin, the kidneys have likewise been demonstrated to afford an effective path of excretion. (Editorial, Jour. Amer. Med. Assoc.)


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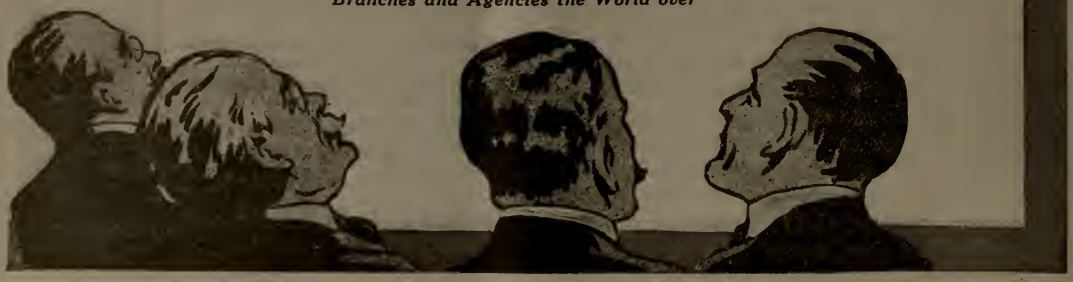

## NEWS AND THERAPEUTIC HINTS.

### Tinea Tonsurans.

Tinea tonsurans is treated by Sutton as follows: The diseased surface is mopped with tincture of iodine. This is followed in a few minutes by the application of a 2 per cent. aqueous solution of corrosive sublimate. The beneficial effect produced is due to the formation of mercuric iodide at the points of contact. Goose grease is the best skin penetrant. Irritation is avoided by treating only a small portion of the diseased surface at a time. (Amer. Jour. Med. Sci.)

### Hemorrhoids.

The following are among the prescriptions given by C. Duba (Med. Press) in an article on the treatment of piles:—

℞ Cocainæ hydrochloridi, gr. viij (0.5 Gm.).
Ext. belladonnæ, gr. xv (1 Gm.).
Ext. hyoscyami, gr. xx (1.3 Gm.).
Glycerini, ʒv (16 c.c.).

M. Sig.: To be painted on the part, and covered with moist dressing and protective.

After three days the piles should be treated each morning with the following lotion:—

℞ Hydrargyri chloridi mitis, gr. lxxx (5 c.c.).
Epinephrini (1:1000), ʒiiss (10 c.c.).
Liquoris calcis, ʒv (150 c.c.).

M. et ft. lotio.

In the evening this dusting powder may be applied:—

℞ Zinci oxidi, ʒiss (45 Gm.).
Pulveris opii, gr. lxxx (5 Gm.).
Betanaphtholis, ʒiiss (10 Gm.).

(Prescriber.)

### Rheumatism.

The author discusses the use of salicylates in large doses in the rheumatic affections of children. Some of his conclusions are constipation during salicylate treatment greatly increases the liability to acid intoxication, but it is not by any means certain that this is due to increased absorption of the drug. When constipation is present, cases of acid intoxication arise on small or on large doses.

The size of the dose of salicylate is not the most important factor in producing vomiting. The presence of a damaged heart appears to be the important factor in this connection, and must tend to limit the specific use of the drug.

Acid intoxication can be prevented by observation of three points: (*a*) Constipation must be prevented, and the dose of salicylate should not be increased while there is constipation. (*b*) The urine should be kept alkaline or neutral. If constipation be present, larger doses of bicarbonate are required for this purpose. Aspirin, which cannot be combined with soda, is less suitable from this point of view than sodium salicylate. (*c*) The salicylate should be given in small doses frequently. To try to give a daily dose of 150 grains in only three or four doses is to court vomiting and severe symptoms of poisoning. (Reginald Miller, in Quar. Jour. of Med; Prescriber.)

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# Department on the Internal Secretions

## Original Articles and Summaries of Selected Articles

### APPENDICITIS AND HYPOTHYROIDISM.*

By E. HERTOGHE, M.D.,
ANTWERP, BELGIUM.

MANY practitioners refuse to countenance the multiplicity of symptoms ascribed by some to thyroid insufficiency. Others consider thyroid insufficiency a pathologic rarity. All this is erroneous and disastrous from the standpoint of practice.

As an aid in thyroid diagnosis and treatment, the author has outlined for his own use the following simple and readily applied theory: The thyroid secretion presides over the elaboration of the various protein systems of the body. Without it, the muscular, nervous, glandular, connective tissue, or osseous cell could not attain the perfection indispensable to its proper functioning. This is shown in the arrest of growth in hypothyroid children and its resumption upon ingestion of thyroid products. The thyroid also presides over the disintegration of the worn-out and useless cell, and hastens the transformation of nitrogenous wastes, directing them toward the urea molecule for elimination with the urine. That this is true is shown by the rapid disappearance of the tissue infiltration caused by these wastes in those with thyroid insufficiency under the influence of a few doses of thyroidin, and the simultaneous enormous increase in the output of urea. From the above it is clear that the effects of hypothyroidism involve the entire organism.

The extreme vulnerability of the thyroid gland has often been referred to. In the child it staggers under the burden of bodily growth and in the

* Summary of article in Bulletin de l'Académie Royale de Médecine de Belgique, January 31, 1914.

adult female, that of menstruation, gestation, and lactation. Few individuals do not suffer, at least in small degree, from thyroid weakness. Few persons do not lose weight, like the frankly myxedematous, when given thyroidin.

The author maintains that thyroid insufficiency predisposes to both enlargement of the tonsils and appendicitis. The first of these associations had already previously been pointed out and supported with evidence by himself and others. The association of appendicitis with thyroid insufficiency is supported by his recent observations on a series of individuals presenting signs of thyroid insufficiency. In a large majority of these tenderness in the ileocecal region was found present. While not all these individuals can be expected to develop acute attacks of appendicitis with perforation, gangrene, and peritonitis, no one can guarantee that such a change from chronic to acute appendicitis will not take place in any given case. The author considers, in fact, that a combination of hypothyroidism with ileocecal tenderness indicates an exploratory operation.

In the last year the author has performed 126 appendectomies, of which 90 were for chronic appendicitis. These 90 patients were operated on merely because of the coexistence of hypothyroidism with ileocecal tenderness, and in not a single instance did the author subsequently feel that operation had been useless. The pathologic condition found related, in the first place, to the cecum, which was generally fixed deeply in the iliac fossa by weak adhesions, and often markedly vascularized and congested. These adhesions ascended almost imperceptibly on the anterior surface of the cecum in the form of hyaline, transparent veils. In the more advanced cases they covered and buried the appendix, fastening it either to the cecum itself or to the ileal mesentery, and, in addition, passed upward toward the hepatic flexure of the colon. In the adult these hyaline veils become thicker and vascular, and practically become bands which interfere with the passage of the feces in the large bowel.

The appendix in these cases, especially in children, is long, large, and fleshy. It is twisted on itself around its mesentery, or makes an abrupt turn on itself, forming a hook. It is generally filled with fecal material, either continuous or aggregated in coproliths. In the incipient cases the appendix is free and movable, but later it is progressively immobilized by the irresistible network of hyaline veils. Microscopically, it shows no peritoneal involvement as long as it remains free; the mucous membrane is normal and the lymphoid aggregations not unusually large. The starting-point of actual acute inflammation is probably the accumulation of fecal material in its lumen.

The essential points in the practical application of the knowledge of this relationship of hypothyroidism to appendix disease are: to be aware of the principal stigmata of the former, and to look regularly for ileocecal tenderness. Two cases are described to illustrate the author's methods:—

Case I was that of a married, childless woman of 32 years. In the last ten years her health had become impaired and she had been to many physicians and clinics, where her blood, urine, and gastric contents had been examined. She complained especially of digestive disturbance; yet the examinations had revealed neither cancer

nor any other grave organic change in the stomach. There was much abdominal pain, but this passed from one area to another. Constipation was a predominant symptom. Two years before, the uterus had been curetted for hemorrhagic fungous endometritis. In addition to the abdominal symptoms, the patient presented peculiar phenomena, apparently arising from a temporary and rapid toxic action on the nervous system. Suddenly, in the course of some outing begun in complete possession of her strength, she would become unable to go a step farther, and stand as though rooted to the spot by irresistible fatigue. Though naturally bright and spirited, she became depressed at times, without apparent cause. Her mental attitude was unstable, and the word neurasthenia had been pronounced by attending physicians, the patient finding therein a warrant of permanent invalidity on her part and losing all hope of recovery. One day, she was suddenly stricken with complete blindness; vision returned, however, half an hour later, after massage of the temples had been applied.

This patient's hair was long, but entirely white, and this, in one so young, suggested to the author hypothyroidism. Constipation, frequent headaches, occipital neuralgia, vertigo, tinnitus, and cold hands and feet were complained of. The patient had periods of chilliness in the evening—a pathognomonic sign, in the author's experience. Spells of marked drowsiness, interrupted by nightmare phenomena, were also present, together with rheumatoid pains all over the body, and venous varices unaccountable at the patient's age. The memory failed at times. All this was strongly suggestive of thyroid inadequacy. With the hand on the cecal region, the patient being recumbent, tenderness in this area was elicited, much to her surprise, no spontaneous pain having been felt there previously. Tenderness in the region of the right kidney was also present.

Hypothyroidism and chronic appendicitis were diagnosticated on the basis of the above facts, and early operation advised. Laxative and appropriate glandular remedies were prescribed in the mean time. Three days later, the patient went out of town by reason of an urgent family matter, and the same evening was seized with violent abdominal pain and high fever, the temperature rising next day to 40.5° C. (104.9° F.). The patient was brought back to town and at once operated. Upon opening the abdomen, turbid fluid welled up. The cecum was purplish, and the appendix fixed to the kidney by its distal extremity. The appendix was divided at its cecal origin, thus liberating the cecum. The appendix was distended with pus to the size of a child's intestine, and traction upon it resulted in the bursting of a pararenal abscess formed at the point where the tip of the appendix had become anchored to the kidney. The cavity was carefully drained, and the patient promptly recovered.

It was the hypothyroidism in this case, the author points out, which had led him to diagnosticate appendicitis before the acute phenomena appeared.

Case II was that of a pale and decidedly puny boy of 12, in whom the visual fields had been getting progressively smaller, and central vision was so reduced that the boy bumped into furniture, etc. The patient's grandfather had had myxedema. The frequent hereditary transmission of thyroid insufficiency led the author to think of such a condition in this patient. Appendiceal tenderness was noted. Consent to operate was given, and upon intervention the latter was found to have been not only justified, but carried out just in time. The child quickly recovered, and gained in strength and stature. Seven weeks after the operation the visual field was found larger, and in eight months had increased tenfold. Ten weeks after this, however, a slight diminution was noted, which the author looks upon as an expression of renewed thyroid insufficiency.

In this case, as in the first, knowledge of the presence of hypothyroidism was of diagnostic value. It is an established fact that the ocular lesions of myxedema frequently find expression in contraction of the visual field. Even

if myxedema had not been known to exist in this patient's family antecedents, the diagnosis would have at once been directed toward probable hypothyroidism, and consequently toward a possible chronic appendicitis.

## THYMIC SYNDROMES.*

By L. MOREL, M.D.,

PARIS, FRANCE.

*Experimental Thymiprive Cachexia and Congenital Thymic Idiocy.*—One reads frequently that the effects of experimental thymectomy are uncertain and inconclusive. This is decidedly a mistake. When the thymus is *completely* extirpated as soon as practicable after birth, in carnivorous or omnivorous animals, somatic disturbances (cachexia thymipriva), slowly evolving toward death, are regularly observed. This has been clearly established by the experiments of K. Basch (1906), Klose and Vogt (1910), Morel (1911), Matti (1912), and Lampé (1913). Thus in dogs, four months after thymectomy, characteristic bony deformities appear. The anterior limbs curve inward and appear too short. The posterior, likewise bent and arched, appear too long. The cranium is large, flat, and short. Toward the fifth month, the animal loses weight, and becomes somnolent, sad, and cachectic. After this there is gradual progression to a stage of coma, in which the animal succumbs about twelve to eighteen months after the thymectomy. A remarkable peculiarity of the thymiprive state is the existence of mental disturbances, which appear about the fifth or sixth month. With its facial features completely relaxed the dog appears idiotic and crushed. It is slow in hearing and understanding the human voice calling it, in realizing the meaning of a welcoming or threatening gesture, and in recognizing its food and sleeping place. It eats with avidity, and apparently without distinction, such articles as meat, wood, corks, and cotton. It loses the capacity of orientation, loses itself in the kennel and bumps against evident obstacles. Finally, it exhibits various perversions, such as gnawing at dung, its foot, its penis, etc. In brief, thymiprive dogs show no special proclivities or desires; they are passive, apathetic, indifferent to everything, even to hunger (though they eat incessantly when food is presented). Psychic deterioration thus in them parallels somatic deterioration.

Such experimental production of a type of idiocy through suppression of the thymus in animals with intact thyroids is not without significance when it is known that 75 per cent. of idiotic children with normal thyroids, meninges, and nerve centers possess no thymus. Thus at Bicêtre, from 1890 to 1903, autopsies of 408 non-myxedematous idiots ranging in age mostly from 1 to 5 years—none being above 15 years—showed the thymus present only in

* Summary of article in Paris médical, January 17, 1914.

104 instances. While it has been generally stated that, in idiots, involution of the thymus is more rapid than in the normal child and that the thymus underwent involution because the individual was an idiot, it seems not unreasonable to believe, in view of experimental thymiprive idiocy, that congenital absence of the thymus is actually the cause of the idiocy. Lange and Dicker in 1911 had under observation a child 7 months old with wholly inexplicable, complete idiocy; the child dying, autopsy showed a very small thymus (1.5 Gm. instead of the normal 6 to 7 Gm.). At Garrè's clinic in 1912 there was noted the case of a child of 2, previously quite normal, who at that time became idiotic, then showed abnormalities of bony growth, followed by cachexia and death. Although myxedema had been considered present, autopsy showed a normal thyroid, but an extremely attenuated thymus. Lampé in 1913 reported 2 similar cases. Thus it seems that, beside idiocy from thyroid aplasia, there exists a form due to thymus aplasia. The latter should be thought of in idiots exhibiting bony deformities, as these reflect the experimental thymiprive syndrome. It would not be unreasonable to expect from thymic opotherapy, in addition to its recognized osteogenetic action, a favorable influence on certain cases of idiocy unresponsive to thyroid treatment.

*Thymic Hypertrophy and Obstructive Asphyxia.*—While disturbances due to thymic aplasia or hypoplasia are uncommon, untoward happenings due to hyperplasia or hypertrophy of the thymus are frequent. As Soli points out, such results are either of asphyxial or syncopal nature, the former type predominating in children and the latter in adults. The two types, indeed, may be present simultaneously, though usually they are not. Between the trachea and sternum the thymus moves up and down 3 to 5 cm. with the respiratory movements. Upon combined expiration and extension of the neck the thymus partially herniates into the cervical region. As with other hernias, permanent displacement and even strangulation may occur, the sterno-costovertebral bony ring and the sternoclavicular attachments of the cervical fasciæ being the constricting structures. Strangulation is favored either by excessive size (non-involution or hypertrophy) of the thymus or by the frequent abnormal narrowness of the bony ring. That the trachea is sometimes found flattened out does not imply that this is the only structure pressed upon. In experimental work the author found that the jugular venous circulation was impeded where the pressure was not sufficient to occlude the trachea. An effect of compression of nerves, such as the recurrent laryngeal, phrenic, vagus, and cardiac, in the production of the dangerous thymic symptoms has not been proved.

That thymic asphyxia may be caused through compression of the trachea cannot be doubted. Proof has been afforded: 1. In autopsies. In a case of Clessin's even a pin could hardly be passed through the seat of constriction of the trachea. 2. During surgical operations. Several operators have noted compression or kinking of the trachea by the thymus, relieved by removal of the latter. 3. By tracheoscopy (Jackson). 4. By X-ray examination (Schubert). Likewise, it is unquestionable that thymic asphyxia may occur

through compression of vessels (jugulars, innominates, superior cava, etc.), as proven: 1. In autopsies. 2. At operations (Denecke). Indeed, pressure upon vessels occurs more frequently than appears, as it varies "with different positions of the neck which augment or diminish the phenomena of venous stasis" (Barbier).

While it is freely stated that the mechanical theory does not account for all the untoward happenings due to thymic hypertrophy, it cannot be denied that it explains all the asphyxial phenomena met with, and the asphyxial type is that almost invariably manifested in children. That this type is much more frequent in the child than in the adult is because in the former the thymus is at its maximum and the bony ring (Grawitz's space) at its minimum of development. That a large thymus should cause no trouble in one case but do so in another is accounted for by a difference in the diameter of the superior straits of the thorax in the two cases. That pressure should not always be noted at autopsy is due to the fact that such pressure is often exerted upon soft structures, *e.g.,* vessels during life; the thymus becoming decongested after death (d'Oelsnitz), these soft structures resume their normal shape. That the asphyxial phenomena due to thymic hypertrophy are actually of mechanical origin is proven by the fact that they may be observed whatever be the nature of the tissues encumbering Grawitz's space. Thus in a case of Hotz's, upon performing thymectomy for tracheal stenosis, the organ was found not hypertrophied but undergoing involution. Considerable relief was nevertheless afforded. Death later taking place, the autopsy showed a cold abscess developing from the third and fourth dorsal vertebræ.

*Excessive Thymic Function and Sudden Death by Syncope.*—A young woman of 20, in perfect health, dies suddenly while dancing. Autopsy: large thymus (Dennis). A workman of 18 dies suddenly in the woods, during coitus. Autopsy: large thymus (Wälz). A child of 16 months falls into a tub of water; though at once pulled out, it cannot be brought to life. Autopsy: large thymus (Paltauf). A young girl of 18 is to be subjected to an interval operation for appendicitis; death takes place during induction of chloroform anesthesia. Autopsy: large thymus (Lapointe). About 200 more or less similar cases exist in literature, with death resulting from no other appreciable cause than emotion, or sudden excitement, and with a large thymus found at autopsy. Whether in infants, children, or adults, there is a manifest suddenness in the symptoms and syncopal phenomena which differentiate these cases from those arising from mechanical pressure. In the former, the thymus is generally large, but not enormous; in a few cases, even, it is of normal size. The sudden death from syncope is thus not due to thymic enlargement.

Paltauf has pointed out that these cases present the following characteristic features: (1) Pale skin, scanty hairy covering, exaggerated panniculus adiposus, and poor development of the genital glands and adnexa; (2) hyperplasia of the various groups of lymph-nodes (neck, axillæ, and mesentery); (3) hyperplasia of the tonsils; (4) hyperplasia of the lymphoid follicles of the nasopharynx, base of the tongue, and intestinal wall; (5)

hyperplasia of the spleen; (6) hyperplasia of the thymus; (7) cardioaortic aplasia, with excessive temity of the heart walls; (8) lymphocytosis, etc. These stigmata are seldom all present at once. Often there is hyperplasia of the thymus alone (status thymicus) or of the lymphatic glands alone (status lymphaticus); where both are involved the complete form is present (status thymicolymphaticus). Both, according to Paltauf, form part of a single general constitutional anomaly, which may have been of toxic or infectious origin (or possibly related to disorders of internal secretion). This condition involves a considerable diminution of resistance to infections, intoxications, exogenous or endocrine excitations, etc. It also implies a special lability of the heart, which is predisposed to inhibition through factors without influence in a normal subject. Such a vulnerability of the heart Eppinger and Hess term vagotony; with it there coexists a diminished excitability of the sympathetic. Sudden death in individuals with a large thymus is thus due, according to Paltauf, to loss of equilibrium between the tonuses of the vagi and sympathetic.

Paltauf's theory is not without its weak points, as it presupposes a toxic or infectious origin for the thymicolymphatic state, which has still to be demonstrated. That thymic and lymphatic hyperplasias are reactions to a common process has also yet to be shown. The structural constitution of the thymus is quite different from that of the lymphoid organs, and it is now classed as an organ with an internal secretion, which is not true of the lymph-nodes. A dual etiology in the thymus and lymphatic changes is conceivable. Wiesel and Hedinger have shown that the lymphatic state is constantly accompanied by hypoplasia of the chromaffine system, while the pure thymic state is almost constantly associated with hypertrophy of these organs.

The inadequacy of Paltauf's theory in explaining a rather large number of cases of sudden death in bearers of a large thymus brings back to favor the explanation formerly advanced by Svehla. The large thymus may be thought of as exercising a toxic action by reason of its secretion being quantitatively or qualitatively abnormal. One can even conceive of a *hyperthymism* independently of hypertrophy of the organ—in fact, with an organ of normal or even subnormal size. Can the thymus, through its secretion, act specifically upon the cardiac innervation and be the direct or indirect cause of a lethal syncope? The answer to this can be given from the experimental hyperthymism created either by injection of thymus extract or by embedding in the tissues a thymus of foreign origin. From such procedures there result in the dog, for example, anorexia, fatigue, a hirsute aspect,—all symptoms of intoxication related to the substance introduced. Besides, there is a *particular excitability of the cardiac nerve centers,* and if repeated injections of thymus extract are made, the blood-pressure descends. Death may even be caused by introducing pieces of hyperplastic human thymus (Hart). This hyperexcitability of the cardiac centers chronically maintained through excess of thymic secretion constitutes a permanent source of danger to the subject. Stimuli without effect on a normal subject may be the cause of a fatal syncope. Examples of such stimuli are: a cold bath, a hot bath, a subcutaneous or intramuscular in-

jection, coitus, dancing, or apprehension related to general anesthesia. Death during narcosis in bearers of a large thymus is not a toxic, but a reflex, death, fear of the operation being the lethal factor, and not at all the narcotic itself. Death during local anesthesia may similarly occur.

Although apparently fundamentally different, the theories of status lymphaticus and of hyperthymism are, as a matter of fact, very similar. The first explains sudden death on the basis of a constitutional neuropathy of the cardiac nervous system; the latter, by a hyperexcitability, of ductless gland origin, of the heart centers. In both instances there is a violent excitation acting on a predisposed heart and causing lethal syncope.

*Thymus and Basedow's Disease.*—The frequent occurrence of hypertrophy of the thymus in cases of exophthalmic goiter is well known. Mattis collected 133 cases of large thymus coexisting with exophthalmic goiter and stated that 76.5 per cent. of cases of the last-named affection dying after operation had an abnormally large thymus. Thus there appears to be a causal relationship of thymus hypertrophy to severity in Graves's disease. Already in 1895, von Mikulicz held that the thyroid theory did not wholly explain the symptoms of Basedow's disease. Of course, all do not subscribe to the ideas of Hart and of Moebius, that the thymus is the primary cause of Basedow's disease, acting directly on the structure and functions of the thyroid. Some, *e.g.*, von Hansemann, consider thymus hypertrophy in exophthalmic goiter a secondary reactive process of the lymphoid tissue. That some relation exists between thymus hypertrophy and the Basedow symptoms is recognized by many German and American surgeons.

According to Garrè, the following evidence may be advanced in support of the thymic theory of Basedow's disease: 1. After thymectomy lymphocytosis (Kocher) disappears as it does after thyroidectomy. 2. Boyer was able to induce lymphocytosis by injecting intraperitoneally in animals thymus extract derived from a Basedow subject. 3. After thymectomy retrograde changes are found in the thyroid at the expiration of six months. 4. In thyroidectomized animals appearance of strumiprive symptoms can be prevented by thymus administration (Gebele). 5. Bircher experimentally induced Basedow's disease in dogs by implanting in the peritoneum hyperplastic thymus glands (from subjects free of Basedow's disease).

As Lenormant remarks, however, the precise rôle of the thymus in Basedow's disease cannot now be defined, at least from the foregoing data, for (1) it has not been proven that thymectomy gives successful results in exophthalmic goiter; (2) there is nothing specific in the production of lymphocytosis by injection of thymus extract from Basedow cases; (3) it has not been shown experimentally that thymectomy leads to structural or functional retrogression of the thyroid, and, in fact, a contrary opinion is held; (4) the author has never been successful in preventing in dogs, by thymus treatment, certain strumiprive symptoms, *e.g.*, loss of hair; (5) intraperitoneal introduction of hyperplastic thymus does not constantly give rise to a Basedow syndrome; indeed, it is even uncommon to obtain anything approaching the latter.

On the whole, the question of the relationship of thymus hypertrophy to Basedow's disease cannot yet be well discussed, owing to lack of sufficient experimental evidence.

## ADRENAL INSUFFICIENCY IN DENGUE.*

By ALFRED KHOURY, M.D.,
BEYROUTH, SYRIA.

In but few acute diseases, according to the author's observations, is the symptom-complex of adrenal insufficiency so frequently—in fact, almost regularly—encountered as in dengue or breakbone fever. Hypoepinephria seems, indeed, in the majority of cases to constitute the basis of the symptomatology of this type of fever. Thus, profound asthenia, sometimes sudden in onset, but almost constant; lumbar and especially epigastric pain and tenderness, and vomiting, sometimes incessant, together with fever and various neuralgic pains, may be cited as the fundamental symptoms of the disease. Convalescence, moreover, although the disease itself is of brief duration, is often protracted and there are exhibited for two or three weeks a most unusual degree of muscular weakness, mental depression, and incapacity for work. Of 7 cases of dengue studied by the author at the close of an epidemic in Syria in 1912, only 2 had epigastric pain and vomiting, but all showed in a more or less marked degree the typical asthenia and also, with great clearness, the "white line" phenomenon of Sergent. Three of the cases were rapidly improved by administration of 30 drops of a 1 : 1000 solution of epinephrin by the mouth, and the white line could no longer be elicited thereafter. On the whole, it seems that epinephrin is likely to prove useful in shortening convalescence in this disease, and that in the grave cases of the disease—though these are uncommon—it will in part supply the present total want of an effectual remedy.

## JUVENILE HYPERTHYROIDISM.†

By WILLIAM HOWARD LEWIS, M.D.,
ROCHESTER, MINN.

The term "juvenile hyperthyroidism" is intended to embrace only those cases of exophthalmic goiter occurring in patients less than 10 years of age, *i.e.*, in a period during which the glandular activities of puberty are considered to be in abeyance. This is, however, a period of growth and de-

* Summary of article in Bulletins et Mémoires de la Société médicale des Hôpitaux de Paris, November 13, 1913.

† Summary of article in the St. Paul Medical Journal, February, 1914.

velopment in which the glands of internal secretion have an important rôle to play in the human economy. In this decade there is lacking one important element, viz., sexual activity, which is a decided factor in adult hyperthyroidism—meaning by sexual activity such processes as are evidenced by menstruation, pregnancy and the menopause. In connection with the latter process, it is interesting to note that hyperthyroidism is also relatively rare in persons past 60 years of age.

Of 1512 patients afflicted with exophthalmic goiter operated on in the Mayo Clinic, only 5, or 1 in 300 cases, were under 10 years of age. In the literature for the past ten years it was possible to find mention of only 4 cases. The following are histories of the 5 cases—all in female children—observed in the Mayo Clinic:—

Case I, aged 7. The goiter and eye symptoms had appeared two years previously and at the same time moderate dyspnea on exertion, as well as tremor. The pulse had ranged from 100 to 130. The child had been growing rapidly, but there had been no appreciable loss of weight or strength. At examination she presented a marked exophthalmos, pulse 120, and a heart dilated possibly one-half an inch beyond normal. There were no definite manifestations of nervousness. Excision of the right lobe of the thyroid was followed by steady improvement and recovery, the pulse becoming normal and intoxication disappearing.

Case II, aged 4. The parents had noticed a mental irritability for eighteen months, while exophthalmos had been remarked twelve to fourteen months previously. There had been no cardiac features and the goiter had not been noted, although a somewhat unusual perspiration had been present. Both superior thyroid vessels were ligated. This was followed by a subsidence of all the symptoms.

Case III, aged 7. Goiter had been definitely present four months before, at which time the eyes were large, although photographs had shown an enlargement of the eyes for two years. Mental irritability and tremor had been observed, and the pulse had ranged from 130 to 150. No cardiac distress; no loss of weight nor strength. Distinct thrills and bruits in the superior thyroid vessels. Exophthalmos decided, but no cardiac enlargement. The left superior thyroid artery was ligated, and a week later the right lobe and isthmus resected. There was a prompt return to normal within a short time.

Case IV, aged 8. Three months previous to examination the patient had had an attack of tonsillitis with vomiting. At that time the eye symptoms were first noted, but no other subjective symptoms. On examination the child was irritable, with a distinct tremor; pulse about 130. No activity in thyroid vessels and no cardiac nor muscle damage apparent. Three months later, the left superior vessel was ligated, and a month after, the right superior. Within three days the patient developed a mild attack of scarlet fever, which caused no apparent physical disturbance and did not interfere with uninterrupted recovery.

Case V, aged 7. Goiter and exophthalmos had appeared one year previous to examination, with a pulse of 140. No other subjective features. Marked thrills and bruits in both superior thyroid vessels. These vessels were ligated, resulting in rapid disappearance of the intoxication.

Plummer's observation of the appearance of symptoms in adult exophthalmic goiter is as follows: (1) cerebral stimulation; (2) vasomotor disturbances of the skin; (3) tremor; (4) mental irritability; (5) tachycardia; (6) loss of muscular strength; (7) weight loss; (8) cardiac insufficiency;

(9) exophthalmos; (10) diarrhea; (11) vomiting; (12) mental depression; (13) jaundice; (14) death.

In comparison with these, the following symptoms were noted in the 5 cases in children: Vasomotor disturbance of the skin in 1, tremor in 3, mental irritability in 4, tachycardia in 5, exophthalmos in 5. All the other features observed in the table for adults were lacking, or present to so slight an extent as to be insignificant. All the children were able to participate in the vigorous activities of their associates without apparent cardiac or muscular distress, while none of them even approached the crisis so frequently occurring in adults. The average adult who has progressed as far as marked tachycardia and exophthalmos has developed such evidences of nerve, heart, and muscle damage as to be obviously incapacitated. In the average adult the hyperthyroidism reaches its climax in about nine months. The average length of hyperthyroidism in the group of cases in children was 11⅘ months, or sufficient time in the adult to have produced serious disturbances. Whether this difference of intoxication in the adult and the child is due to a qualitative difference in thyroid activity, to a higher resistance on the part of the child's vascular and nervous mechanism, or to some obscure internal glandular compensation, there is at present no means of determining.

A double ligation was performed on 3 of these patients; in 2 a portion of the thyroid was resected, this being preceded in 1 by a single ligation. All of these operations gave prompt and, to date, satisfactory results, in contradistinction to adults, in whom recurrences are apt to occur within a comparatively short time after ligation unless a portion of the gland is later removed.

## PARATHYROID EXTRACT IN PARALYSIS AGITANS.*

By WILLIAM N. BERKELEY, A.B., Ph.B., M.D.,
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Commercial parathyroid gland worked well in a few cases, but was found so variable and uncertain in its action that it had to be given up. Later the author used a nucleoproteid preparation of the parathyroid made up by Beebe's method. The nucleoproteid is quickly dried in a draught of cold air, so that within eight or ten hours after the warm glands leave the bullock a minute amount of smooth, yellow powder is obtained which stands physiologic test admirably, is stable, easily handled, and does not require the ice-box for its preservation. The powder is rubbed up with milk-sugar as a menstruum, and dispensed in sealed and dated bottles of 80 capsules. Each capsule contains 1/50 grain of parathyroid nucleoproteid. The average dose is 2 per day—sometimes less, where the patient is sensitive to the action of the remedy.

* Summary of article in International Clinics, December, 1912.

The above preparation gives satisfaction not only in Parkinson's disease, but also in any form of tetany where the stomach can retain food. Otherwise, a sterile hypodermic preparation of the nucleoproteid must be used. In paralysis agitans there are no special contraindications, though some patients complain of "nervousness," inability to sit still, and an aggravation of their habitual constipation after a few days' dosage. Nothing is necessary in these cases except to diminish the dose and increase again more slowly. Little benefit of a satisfactory character can be expected except from small doses continued over a long period of time—three months or a year. Patients taking parathyroid require to make no change in their mode of life, diet, or habits not otherwise indicated. Those able to attend to business should be encouraged to work, but with shorter hours and more frequent periods of repose.

A few patients do much better on a hypodermic preparation than on capsules. The hypodermic solution of nucleoproteid is easily administered, and causes little or no pain or irritation, if given with proper aseptic precautions. Sometimes a capsule may be given in the morning and a hypodermic injection at bedtime—thus securing for the patient a restful night. The base of the solution is sterile normal saline solution, and each cubic centimeter contains $\frac{1}{50}$ grain of parathyroid nucleoproteid and a trace of chloroform. Kept in the ice-box, the solution retains its efficiency for at least six weeks or two months, and probably much longer.

Where the patient has obtained any relief from hyoscine before beginning the parathyroid treatment, he should continue it afterward. The two work well enough together. A pure drug must be used. The dose of hyoscine in paralysis agitans is often made needlessly large; $\frac{1}{200}$ grain is generally effective. Occasionally duboisine may work better than hyoscine. Hyoscine makes many patients so wretched in other ways that they refuse to take it. Delirium is a common symptom, and in the later stages of the disease urinary retention with overflow may occur. This should be carefully watched for. Of remedies for chronic constipation, enemata and one or another form of the extract of rhamnus purshiana will prove most reliable in the long run. Calcium salts have produced no benefit in the author's hands. Morphine hypodermically may be given in small doses and infrequently for a long while without great harm, and its employment should not be too long postponed when other remedies fail.

Of mechanical remedies, passive motions, warm baths, and general massage of the limbs and trunk are helpful, but the front of the neck should on no account be massaged; an excess of thyroid secretion is thus liberated in the system and the patient grows rapidly worse. Active exercise is of value in all patients who can take it without too great pain or fatigue. No exercise that overfatigues is good. A daily airing in a wheel chair or a carriage (not a motor-car) is essential for those who cannot walk. For patients with sufficient means, extensive traveling by easy stages is often of great benefit. The patient should be cared for with sympathy and cheerfulness, and in the common event of psychasthenic fear, nervousness, or mental depression, an ap-

peal to the reason, a resort to the consolations of religious faith, and such other rational resources as may be available will prove of marked assistance.

The patient should be encouraged to eat freely of a mixed diet—taking in moderation anything that agrees with him and does not aggravate constipation. When stimulants have been required, aërated Scotch whisky has given the author's patients more general satisfaction than aught else.

Thus treated, the patient generally attains within six months or a year to a stationary condition, not of cure, but of very fair comfort, and remains thus for an indefinite period.

## RELATION OF THE THYROID GLAND TO CARBOHYDRATE METABOLISM.*

By W. CRAMER and R. A. KRAUSE,

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Most observers agree in attributing to the thyroid secretion a direct stimulating influence on nitrogen metabolism and on the total metabolism. To the latter factor they attribute, as a rule, the effect which the administration of thyroid has on fat metabolism. The observations recorded by the authors show that the thyroid hormone has a marked and very peculiar effect on the carbohydrate metabolism. If rats kept on a carbohydrate-rich diet (bread and milk) are fed from two to eight days with relatively small doses of fresh thyroid gland (sheep's thyroid was used mostly) the glycogen-content of the liver falls so low that the glycogen cannot be estimated gravimetrically in the liver. Such low values in a normal rat are found only after ten to fifteen hours' fasting.

These results were tested and confirmed by experiments on cats. These animals were also kept on a carbohydrate-rich diet (porridge and milk) and fed for one or two days repeatedly with fresh thyroid gland. Only a trace of liver glycogen was found in the thyroid-fed cats, except in 1 case, in which there was 0.37 per cent., a value considerably lower than those of the controls.

It was found that the effect of thyroid feeding on the glycogen-content of the liver is independent of feeding. Experiments on the tolerance for glucose after thyroid feeding were made on dogs, the results showing that thyroid feeding produces a slight but distinct lowering of the tolerance for glucose. There was found to be no diminution in the sugar-content of the blood, but rather the reverse.

It is concluded, therefore, that the internal secretion of the thyroid, when administered to normal animals, has an inhibiting influence on carbohydrate metabolism. But since the utilization of carbohydrates by the organism is not markedly affected, as shown by the comparatively slight lowering of

* Summary of article in the Proceedings of the Royal Society, Series B, August 26, 1913.

the tolerance for glucose, it follows that the thyroid hormone acts specifically on only one aspect of carbohydrate metabolism in that it inhibits the formation and storage of glycogen in the liver.

The similarity observed in the distribution of the urinary nitrogen in thyroid feeding and in withdrawal of carbohydrates (increased excretion being as urea and ammonia chiefly—not in creatinin and uric acid) suggests that the action of the thyroid hormone on protein metabolism is effected, partly at any rate, through its action on carbohydrate metabolism.

The most remarkable feature of the condition induced by thyroid feeding is that the marked inhibition of the glycogenic function of the liver is not accompanied by a glycosuria or, at any rate, a very marked lowering of the tolerance for glucose. This absence of any marked influence on the more obvious features of carbohydrate metabolism masks the relation which exists between the thyroid secretion and carbohydrate metabolism, and has, no doubt, been the reason why this relation has not been demonstrated before. The fact that the glycogenic function of the liver may be so completely in abeyance without producing any correspondingly marked effect on the tolerance for glucose leads one to conclude that these two aspects of carbohydrate metabolism are independent of each other to a far greater extent than is generally supposed.

The constancy with which the effect of the thyroid hormone on the liver glycogen is produced suggests this as a suitable test for the investigation of the relations which the thyroid is supposed to have to other internally secreting glands.

It does not necessarily follow from these experiments, although it is possible, that the thyroid hormone, *in the amounts in which it is poured out into the blood in a normal animal,* similarly exerts an inhibiting influence on carbohydrate metabolism. For it is a well-known fact that physiologically active substances which in large doses have a paralyzing effect produce a stimulating effect in smaller doses.

## Abstracts from Current Literature on the Internal Secretions

**Failure of Vision in Pituitary Disease and its Treatment.**—The writers record 4 cases in which local pressure symptoms attributable to an enlarged pituitary body greatly diminished under thyroid medication. Among the local results of an enlarged pituitary are mentioned: (1) bitemporal hemianopia (the most striking but, according to some clinicians, not the commonest); (2) homonymous hemianopia; (3) a central scotoma expanding into the temporal field; (4) color defects preceding form defects. Perimetric studies show that a piece of the upper and outer temporal half of the field is generally obliterated before the rest of that

half in the temporal hemianopic cases. The writers suggest that, given equal pressure on all the fibers of the chiasma, the function of some fails before that of others. Fisher thinks that the visual symptoms in many cases are best explained by traction on the visual pathways owing to upward growth of the tumor behind the chiasma and between the optic tracts in the interpeduncular space. The loss of function of vision is in advance of the apparent structural changes, and on relief of pressure the vision often recovers. Case I was a woman of 40, acromegalic, who had been observed for five years. It was the puffiness of her enlarged hands which originally suggested thyroid treatment. General and local improvement followed. The fields became practically normal. Skull radiography showed an enlarged sella. Case II was a lady of 25, who had become stout eighteen months before. At that time some visual failure set in, which rapidly increased, then diminished, and then increased again. She could not see things at each side. The case was diagnosed as in all probability due to pituitary disease. Thyroid feeding brought the visual fields almost to normal. Later, pituitary extract was also given. Case III, a middle-aged man, had had failure of vision to the left for a year or two. No distinctive acromegalic signs, but the skiagram showed a distinctly enlarged sella. Thyroid treatment had only recently been begun. Case IV was that of a typical acromegalic man. After vision had been impaired for a long time and acromegaly was well advanced, thyroid treatment was followed by decided improvement. The case supports Cushing's view that the primary optic atrophy of pituitary disease more often represents a physiologic block to light than actual nerve-destruction. Two cases of de Schweinitz are mentioned which were improved by large doses of thyroid extract with mercurial inunction. Fisher has also seen visual improvement in several cases under thyroid treatment. The writers conclude that, since in cretins and in thyroidectomized animals the pituitary tends to increase in size, one may well believe that a therapeutic hyperthyroidism may sometimes be accompanied by a diminution of the size of an enlarged pituitary. Sometimes, to be sure, glands vary spontaneously, and pressure may also subside without any drug treatment. The authors urge, however, a trial of thyroid treatment in pituitary disease. H. Campbell Thomson and W. Lang (Archives of the Middlesex Hospital, vol. xxix, 1913; Medical Chronicle, January, 1914).

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**Pituitary Treatment in Diabetes Insipidus.**—Numerous clinical observations have borne witness to the possible association of diabetes insipidus with lesions of the hypophysis. Haushalter and Lucien observed simple polyuria in a case of tuberculosis of the pituitary, and Simmonds in one of cancerous metastasis in the posterior part of the sella turcica. Simultaneous presence of polyuria and infantilism, of polyuria and Fröhlich's syndrome, etc., has been recorded. On the other hand, experimentation has shown, originally in the hands of Vassale and

Sacchi, that the pituitary takes part in the regulation of the water-content of the body. Animals partly or wholly hypophysectomized showed, in addition to rigidity of the hind limbs, fibrillary contractions, and clonic or tonic spasms, polydipsia, polyuria, and a urine of low specific gravity, alkaline in reaction, and devoid of albumin or sugar. In view of these observations the author was led to try pituitary medication in a case of diabetes insipidus. The patient, aged 23, after missing her menstrual periods for four or five months, developed pronounced polydipsia and polyuria until, upon admission to a hospital four months later, 5 to 6 liters of watery urine were passed daily. There was no functional or organic nervous disorder. The patient had been treated several years before for lung tuberculosis, but there were no more tubercle bacilli in the sputum at the time. Three years before, prolonged antiluetic treatment had been taken because of a positive Wassermann reaction; at the time of admission the reaction was still clearly positive, though no other signs of syphilis could be found. The patient was treated in succession with opium, belladonna, and strychnine without result. A salt-free diet had no effect on the polyuria. Calomel and iodides were also tried without result. Ingestion of epinephrin was without effect, but the first injection of pituitrin given caused the urinary output to drop from 5 to 2½ liters. By continuing the injections, the urine was kept around or below 2 liters. Thirst disappeared and the nights became quiet. The effect persisted, however, only as long as the injections were administered, polyuria and polydipsia reappearing as soon as they were stopped. Control injections of saline solution were followed by immediate return of polyuria. Attempts to substitute ovarin, pancreatin, and thyroidin for the pituitary preparation were without success. It is reasonable to believe that the polyuria in this case was related to disturbed pituitary function, but it is not possible to state whether this disturbed function was a sole and sufficient cause, or whether it were not merely a single factor in a combination of disturbances in the ductless-gland system which the injection of pituitrin was capable of temporarily restoring to their normal correlated activity. F. Farini (Gazzetta degli Ospedali e delle Cliniche, September 11, 1913; Presse médicale, November 8, 1913).

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**Action of Extracts of Lymph-glands and Other Organs on the Tubercle Bacillus.**—In 1886, at a time when tuberculosis was universally considered a disease conferring no degree of immunity, Marfan made the assertion that scrofula to a certain extent acted after the manner of a vaccination against tuberculosis, and later pointed out that active tuberculosis was almost never met with in subjects that had had scrofula during childhood and recovered completely from it before the age of 15, that is, provided no other focus of the disease could be clinically detected before this recovery had taken place. Since then these statements have been confirmed by a number of clinicians, and many experimenters have brought forward findings showing the importance of the rôle of

the lymphatic glands in protecting the body against tuberculosis. As contradictory results had, however, been recorded by some, and as the interpretation of the facts available involved some difficulty, the authors thought it necessary to take up the question again, studying first *in vitro* the action of normal lymph-node pulp on the tubercle bacillus and comparing it with that exerted by other organs.

The experiments consisted in the preparation of macerations of the lymph-nodes, of the splenic pulp, of the liver, and of the brain, and their sterilization by tyndallization. To these macerations was then added a definite quantity of tubercle bacilli, and after being left in the incubator for a time, the contents of each tube was injected into a fresh guinea-pig. The controls received a like amount of tubercle bacillus emulsion, previously subjected to a similar treatment by tyndallization, incubation, etc. Taking the results as a whole, the lymph-node pulp seemed plainly to reduce the virulence of the tubercle bacilli, guinea-pigs receiving the pulp preparation surviving even 3 times as long as the controls. In trials with splenic and hepatic pulp, the period of survival was 2½ times as long as in the controls. Using serum, the survival was 1.25 times as long, and using brain tissue, only 0.56 as long, the animal thus dying before the control. The animals given injections of lymph-node or spleen extract and dying rapidly showed only quite localized tuberculous lesions. Thus, *in vitro* normal lymph-node and spleen have a distinct inhibitory action on the tubercle bacillus. While the effect may possibly be due to autolysis products, the authors believe that, since various authors have observed this inhibitory action likewise *in vivo*, it takes place in the living tissues, before autolysis. Marfan, Weill-Hallé, and Lemaire (Journal de physiologie et de pathologie générale, July, 1913; Presse médicale, November 12, 1913).

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**The Coagulation of Blood and the Thyroid Gland.**—As it is frequently difficult to determine in a goitrous individual whether a condition of excessive thyroid function or one of diminished thyroid function exists, a differential coagulation test, if valid, becomes one of eminent clinical importance, upon which may be based rational surgical or medical treatment. Such a test was subjected to a critical analysis by the authors. The instrument used was that recently devised by Fuld, consisting of a metronome, to the pendulum of which is attached a U-shaped glass tube. The drop of blood to be examined is allowed to fall into this tube. A small leaden ball is then introduced with the tube. The pendulum is at once set in motion, each swing corresponding to a second of time, and as long as the drop of blood remains fluid the leaden ball rolls along the bottom of the tube. But as soon as coagulation sets in, the motion of the ball stops. The number of excursions of the pendulum before the leaden ball becomes stationary presents the coagulation time in seconds. Under normal conditions this time is two or three minutes.

In each of a large number of cases of goiter the coagulation time was

found to be increased, whatever the actual functional condition of the thyroid. In conditions of hypothyroidism, as in cretins and cretinoids, the delay in coagulation is more pronounced than in the thyrotoxicoses. It is not possible to differentiate between hyper- and hypo- thyroidism by determination of the coagulation time. In 3 cases, after excision of a goiter and resection of the thymus, the authors observed an improvement in the coagulating power of the blood. Administration of thyroid extract in doses not too large results in certain cases in an improvement in the clotting property. In a case of hemophilia associated with infantilism of thyroid origin thyroid administration restored the power of coagulation. Before this treatment was instituted a drop of blood had not clotted in fourteen hours, but after the thyroid extract it clotted in twelve minutes. The explanation of the greatly prolonged coagulation time that is observed in disturbances of the internal secretions and in the "status hypoplasticus" may possibly account also for the deficient coagulating power observed in hemophilia. The suggestion is made that the fundamental disturbance may lie in the enzymotic processes in the blood. These may also be at fault in the delayed coagulation that is present in nephritis, in various types of anemia, and in certain diseases of the liver. Julius Bauer and Marianne Bauer-Jokl (Zeitschrift für klinische Medizin, Bd. 79, Nu. 1 und 2; Medical Record, February 7, 1914).

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**Accessory Pancreas.**—Under this term are comprised islands of aberrant pancreatic tissue, unrelated directly or indirectly with the main gland and existing in abnormal locations. Accessory pancreatic tissue has been found in the gastrointestinal wall in nearly its whole extent except the colon. It is met with oftenest in the duodenum, less frequently in the jejunum and stomach, and still less often as one travels down toward the cecum. Aberrant pancreas is far from being a rare condition. It is not frequently mentioned in literature because not likely to be found unless especially sought at autopsies. Mouchet found 5 cases in 200 autopsies, and the author 6 cases in 467 autopsies. Thus, there is about 1 case in every 60 subjects examined. In each of these instances the accessory organ was of considerable size, and in all but 3 it was structurally complete, with islands of Langerhans, secreting elements, and secretory ducts. Histologically, there is nothing to contradict the supposition that these organs fulfill the same secretory function as the normal pancreas.

From the clinical standpoint it is of significance to note that in medical affections of the main gland the accessory pancreas is not necessarily also involved. Thus, in diabetes mellitus it might compensate in a measure for the lacking internal secretion of the diseased main organ. In the great majority of instances the accessory pancreas includes islands of Langerhans normal as to size and numbers. From the surgical point of view it is known that certain inflammations of the pancreas are often

associated with pre-existing disease of the liver or biliary passages, the ducts of the liver and pancreas being in sufficiently close anatomic relation to render infection of the one a factor in infection of the other. The aberrant pancreas never shows this close relation to the biliary passages and therefore readily escapes when they are infected. Finally, the surgeon must bear in mind the possible existence of an accessory pancreas in order to avoid mistaking it for a tumor in the course of an abdominal operation. Saltykov ascribes to accessory pancreatic tissue the intestinal conditions studied by various authors under the name of carcinoid tumors (Oberndorfer) or adenomyomata of the intestine (Trappe). O. Kremer (Archives de médecine expérimentale et d'anatomie pathologique, September, 1913; Semaine médicale, February 4, 1914).

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**Pituitrin as an Ecbolic.**—Pituitrin exerts a more pronounced oxytocic action in multiparæ than primiparæ. Its administration seems to close that gap of time intervening between the true onset of labor and the final stage of delivery, which frequently causes unnecessary loss of time to the physician and a waste of energy on the part of the patient. Of the author's total number of 77 cases, 27 were primiparæ and 50 multiparæ. Of the 27 primiparæ, 14 had normal delivery, while in 13 cases forceps were applied. In the 13 cases the pains were increased by the pituitrin to a very marked degree, though not sufficiently to complete labor; 7 of the number were of abnormal presentation. In the 50 multiparæ the pains were markedly increased, with but one exception. Forty-four were delivered in twenty minutes to two hours. In 6 cases forceps were applied, 3 of which were abnormal presentations.

Pituitrin leaves the patient in much better physical condition after labor is completed. The child also seems to be in better general condition. Of the multiparæ very few had after-pains, and where these were present they did not last more than ten to fourteen hours. The author noted that the uterine contractions remain more permanent and the lochia flows quite normally after pituitrin. Since beginning its use, he has entirely discarded ergot and has had but 1 case of hemorrhage, which was controlled promptly by packing the vagina with cotton tampons. This case followed a forceps delivery, and, when it was once controlled, the hemorrhage did not return.

In administering pituitrin it is important to use a fresh preparation. The syringe must be entirely free from other substances, particularly alcohol, which seems to interfere with the drug's action. The author finds that better results follow subcutaneous injection well under the skin in the gluteal region than in the muscles or fatty tissues. It is also important not to give chloroform before the child's head is pressing upon the perineum, as its early administration retards the action of pituitrin, delays labor, and necessitates a second injection. Benson (New Orleans Medical and Surgical Journal, June, 1913).

**Internal Secretion of the Salivary Glands, and the Relation of the Latter to the Reproductive Organs.**—The salivary glands present certain phenomena which might be designated as "genital." Thus during sexual excitement they secrete more, pregnancy and certain pathologic genital conditions produce the same result, and ovariotomy is sometimes followed by parotitis. Mumps is frequently accompanied by orchitis or oöphoritis. Of 13 cases exhibiting various forms of the relationship under discussion, 3 concerned syphilitics, of whom 1 had syphilitic orchitis, another peritoneal carcinomatosis, and the third, obesity of thyroid origin. In 8 other cases obesity was combined with the status thymicolymphaticus, involving an enlargement of the thymus. The obesity in these 8 cases could be ascribed in some to the thyroid, in others to the pituitary, and in 1 instance to an ill-defined functional brain disturbance. The 2 remaining cases in the series of 13 were patients with exophthalmic goiter. The great majority of these obese patients showed genital infantilism, and one of the Basedow cases was impotent. As to the glands involved, they generally comprised all the salivary glands, sometimes with the lachrymal glands in addition. Judging from clinical observation alone, the changes in these glands consisted either of hypertrophy or of fatty infiltration. Many of the patients were quite young, and their sexual capacity could not be ascertained, but several of them showed peculiarities of growth and stature which, at later periods in life, are rather often associated with genital abnormalities. Thus it may be presumed that the salivary glands play a rôle as internally secreting organs and exert a partial, but not insignificant, influence on the reproductive organs. The aggregate of changes noted in the salivary glands often recalled the syndrome of Mikulicz. The latter, when not an indication of syphilis or leukemia, appears to be associated especially with the status lymphaticus or thymicolymphaticus. Precisely these conditions were met with in many of the 13 patients discussed. In any case the nature of the active principle of the internal secretion of the salivary glands is at present unknown. L. Mohr (Zeitschrift für Geburtshülfe und Gynäkologie, p. 1, 1913; Semaine médicale, November 26, 1913).

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**The Ductless Glands and the Nervous System.**—Reference made to the views of the Vienna school on the function of the thyroid secretion, as expounded by Falta and Rüdinger. According to their theory, the thyroid and parathyroid secretions oppose one another, the former stimulating the sympathetic nerves, the latter inhibiting them. The secretions of the pancreas and of the parathyroids retard metabolism, while those of the thyroid and adrenals augment it. Hence loss of the thyroid secretion leads to (1) slowed metabolism; (2) absence of stimulation of the adrenals; (3) escape of the pancreas from inhibition; (4) decreased excitability of the vagus in all its area of distribution, which includes the thyroid gland.

One of the perplexing features of all these glands is their double anatomic constitution. In each, two types of cells are found living in close neighborhood, but there is no obvious reason why they should have chosen such a union. Thus the thyroid gland is associated with the parathyroids. The pituitary can be divided microscopically into the posterior pars nervosa and the anterior glandular portion; between the two lies the pars intermedia. The adrenal glands consist of cortex and medulla; it is now recognized that the adrenal medulla consists of paraganglion cells, controlled by the splanchnic nerves and secreting the epinephrin that maintains the unstriped muscle regulated by the sympathetic nervous system at a fair level of tone for its routine activities. As for the pancreas and the testes, each again contains secreting cells of two distinct types. The cortical cells of the adrenal glands secrete a special lipoid, a doubly refracting fat, and so do the interstitial cells of the testis. Active chemical substances of relatively low molecular constitution, not destroyed by boiling, can be extracted from the adrenal and pituitary glands, and apparently from the thyroid and the pancreas also.

The author enumerates clinical facts suggesting a common bond between the separate ductless glands, and urges the need of further observation and research in the matter of these tangled relationships. He particularly commends the adrenals to the attention of any neurologist who may be seeking for deeper acquaintance with the physiologic processes of nervous activity. Elliott (British Medical Journal; Charlotte Medical Journal, March, 1914).

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**Physical Evidence of the Thymus.**—Blumenreich in 1900 determined the area of dullness of the thymus by percussion, and afterward by autopsy proved his outlines to be correct except for tongue-like processes or lobes which did not appear in view. Successful attempts to obtain a shadow by the Röntgen rays had been reported, but attempts made by the authors to substantiate those findings ended in absolute failure.

The authors' exploratory method aims at a refinement of the Blumenreich technique by means of muffled auscultation and very light percussion. The thymus is covered by the thick sternum and rests on the air-filled trachea; hence any jarring may change the percussion sound. The thymus edges are almost continuously covered by lung tissue. One of the authors constructed a small instrument consisting of a small plexor and pleximeter which can be worked with one hand while the stethoscope is held by the other. In addition to auscultatory percussion the authors employed the so-called friction method for determining the borders of the thymus. This consists in placing a phonendoscope in the middle of the thymus area while a bristle brush is drawn diagonally over the sternal area and the point noted where the sound is deadened or lost. More than 140 cases were examined and $\frac{1}{10}$ of them confirmed by autopsy. The thymic area was outlined with reference to the suprasternal notch, the sternal borders and the ribs.

The greatest anatomic development of the thymus takes place between the sixth month and the third year. The authors found the thymic dullness during this period of rhomboid form, varying in size according to the age. The lower edge generally reached to the second or third rib and commonly ran in an oblique direction. A clear, full tone was found between the lower border of the thymus and the upper border of the heart. The lateral borders correspond in general with the sternal line on the right and the parasternal line on the left. The size of the thymus varies according to the age of the child and its nutritive condition, and to certain pathologic conditions.

Of the structures which may be mistaken for enlargement of the thymus, the lymph-glands are the most important. Tuberculous changes in the lung also cause deception. Carl Basch and Adolph Rohn (American Journal of the Diseases of Children; Albany Medical Annals, September, 1913).

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**Studies on Epinephrin Glycosuria.**—The author found that whereas 150 Gm. of grape sugar increase the sugar content of the blood, this increase is, as a rule, insufficient to evoke glycosuria. If epinephrin is injected subcutaneously it gives rise to glycosuria, provided that immediately before the injection the organism has received a considerable amount of grape sugar or of foods containing it. In this event the glycosuria is accompanied by a marked hyperglycemia. If, however, instead of grape sugar, levulose has been administered, no glycosuria results.

Another observation made was that the glycosuria-producing and diuretic properties of epinephrin are quite independent of each other.

Small doses of cocaine sensitize the action of epinephrin, increasing both the hyperglycemia and the glycosuria. On the other hand, a preparation containing the total alkaloids of opium, if injected with epinephrin, inhibits the glycosuria-producing powers of the latter. The mechanism of this inhibition is twofold. On the one hand, the opiate delays the mobilization of the glycogen in the liver and reduces the hyperglycemia; on the other, it diminishes the glycosuria by impairing the secretory activity of the kidneys. T. Landau (Zeitschrift für klinische Medizin, vol. lxxix, Nos. 3 and 4).

The above facts are pregnant with significance from the viewpoint of the mechanism of diabetes and its treatment. There can be little doubt that a derangement of the internal secretions is at any rate in part responsible for this condition, and that possibly an excess of the internal secretion of the suprarenal capsules or of some allied gland is an important factor in the production of diabetes. There is another necessary component in the nexus of epinephrin glycosuria, namely, the intake of a sufficiently large quantity of grape sugar. In other words, the dietetic factor in diabetes is an important one. Another fact brought out by the experiments of Landau is that the therapeutic value of opium in diabetes may in part be due to a harmful effect of this substance upon the renal epithelium. (Editorial in Medical Record, March 14, 1914.)

**Combined Hyperthyroidism and Pancreatic Insufficiency.**—A man 58 years of age was admitted to a hospital for treatment of a rebellious chronic diarrhea. The patient was mildly alcoholic. The disturbance had set in four months before with an abscess in the throat and a few small abscesses on the head. The diarrhea, with some mucus and blood, as well as tenesmus, appeared shortly after. The patient had lost much weight, and his temperature showed large fluctuations, as in hectic remittent fevers. A few points of suppuration still existed on the posterior surface of the cranium. There was noted a slight degree of exophthalmos, which the patient said he had not previously noticed. There was also a slight tremor of the fingers. The reflexes were diminished, but sensation was normal.

The patient died and an incomplete autopsy was made. The liver was found enlarged and in a state of fatty degeneration. The pancreas seemed normal and but slight microscopic changes were found. The case was thus one of typical functional pancreatic insufficiency, accompanied by the ordinary phenomena of hyperthyroidism. Experimentally as well as pathologically, evidences of a reciprocal relationship between the pancreas and thyroid have frequently been noted. In the author's case, however, it did not seem plausible that the condition of the pancreas, which was so slightly diseased, should have reacted on the thyroid. On the other hand, the tachycardia, tremor, and exophthalmos had already been present when the patient was admitted. It was therefore possible that these phenomena had been primary and reacted on the liver. The glycosuria noted in the case may have been due either to the hyperthyroidism or to the deficiency in the pancreatic internal secretion. C. B. Udaondo and O. M. Pico (Revista de la Sociedad médica Argentina, May-June, 1913; Semaine médicale, December 10, 1913).

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**Adrenals and Puncture Glycosuria.**—Mayer and Kahn had previously shown that after bilateral removal of the adrenals in rabbits, the glycosuria normally produced by puncture of the floor of the fourth ventricle did not occur. Participation of the adrenals in the production of this type of glycosuria was therefore rendered probable, and these observers had concluded that upon transmission of the stimulus due to the puncture by way of the splanchnics to the adrenals, the latter discharged their epinephrin, thereby bringing about glycosuria. These authors had been able to demonstrate, moreover, that the adrenals, besides exhibiting a diminution of the chromaffine reaction under these circumstances, showed a less content of blood-pressure-raising principle than normal. The present author concludes from his research, on the other hand, that histologic study of the medulla of the adrenals affords no ground for assuming a participation of these organs in the production of puncture glycosuria outside of the direct sympathetic effect. Upon removal of one adrenal there is noted in the other adrenal a marked loss in chromaffine substance, which loss depends upon the splanchnic being intact. The author's studies

showed also that the chromaffine constituent of the secretion of the adrenal medulla is produced in the cells of the medulla and then discharged into the vascular system. In rabbits the several stages of this process take place independently in the various portions of the medulla. A. Jarisch (Zeitschrift für experimentelle Pathologie und Therapie, vol. xiii, No. 3, 1913).

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**Final Results in Hypophyseal Surgery.**—Report of a case of typical Fröhlich type of hypophyseal disease, with marked signs of endocranial pressure, operated two years before by the intranasal route. A cyst was evacuated and recovery followed, the result of feeding pituitary gland over two years.

The indications for operation in hypophyseal disease may be classified as absolute and relative. Operation is absolutely indicated in those cases in which the tumor immediately jeopardizes the life of the individual or is causing progressive blindness. It is relatively demanded when because of perverted, or increased, or decreased secretion, the well-being and ultimately the life of the individual are threatened. If the tumor is growing rapidly or has grown to a large size, or if a cyst has suddenly filled, there occur pressure symptoms both locally and generally that imperatively demand intervention. As the safety of the operation increases, the field of the relative demand will be broadened.

Acromegaly should be treated more conservatively, particularly since many of the cases have passed over into the stage of hypopituitarism. As the safety of surgical procedures increases, operation should be attempted in the early stages before the growth has left the sella. The more complicated and late cases, and those with atypical signs, should be treated medically until the results in the typical cases are well established. Allen B. Kanavel (New York Medical Journal, April 26, 1913).

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**Hyperglycemia, Hypertension, and the Adrenals.**—That injections of epinephrin in animals cause both a rise in blood-pressure and increase in the relative amount of sugar in the blood is a well-known experimental fact. Hence, it has been suggested that the high blood-pressure in renal disease is due to an excess of epinephrin in the blood, and a study of the changes taking place in the amount of sugar in the blood in nephritic patients with high pressure has been undertaken. No unanimous opinion having as yet been reached on this score, the author instituted experiments to determine the content of sugar in the blood in cases of arteriosclerosis with hypertension but without disturbed renal function, as well as in patients with chronic nephritis and high blood-pressure. It was found that hypertension of renal origin may be accompanied by hyperglycemia, but that in arteriosclerotic hypertension without disturbance of renal function the relative amount of sugar in the blood is generally not increased. This latter observation would tend to weaken the theory that

in these cases of arteriosclerosis there is present an hyperadrenia. Landau, moreover, found nothing in the nature of the structural changes in the adrenals in human arteriosclerosis and in experimental atheroma to indicate an excessive activity of the adrenals. These findings agree with the observations of the author. A. Farini (Gazzetta degli Ospedali e delle Cliniche, August 3, 1913; Semaine médicale, November 26, 1913).

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**Active Principles in the Hypophysis.**—The preparations of the pituitary in general therapeutic use can be classed in 2 groups. To the first group belong pituitrin and pituglandol, and to the second, hypophysin. The active substances present in the first group raise the blood-pressure, while those in the second group lower it. The constituent of hypophysin which lowers the blood-pressure is identical with the vasodilatin which exists in all organs of the animal body, while the substance which raises the blood-pressure is identical with vasohypertensin, which has been found in the blood, the thymus, the salivary glands, the pancreas, and the brain. Separate preparation of vasodilatin and vasohypertensin from the anterior and posterior lobes of the pituitary is expedient. Führer's hypophysin the author considers a crystalline mixture which does not in itself constitute the active principle, but contains it in admixture. L. Popielski (Berliner klinische Wochenschrift, No. 25, 1913).

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**Colloidal Silicon in the Treatment of Simple Goiter.**—Report of the case of a young girl whose neck enlarged rather suddenly after she had danced all evening at a ball. The right lobe was especially hypertrophied, pushing foward the sternomastoid muscle. There were no signs of exophthalmic goiter. A series of 4 injections, each consisting of a 3-c.c. ampule of colloidal silicon, was given at four-day intervals. No pain followed the injections. After the third injection the thyroid became softer and dyspnea was relieved. After the fourth, the neck circumference was less by 3 cm. Two weeks later, after 2 more injections of the colloidal preparation had been given, the neck measure diminished 2 cm. further, practically to its normal circumference. Silica had already been used in simple goiter, but not in the colloidal state. The author is convinced that the injections were beneficial in this case and advises a trial of colloidal silicon in both simple and exophthalmic goiter before resorting to operation. Suard (Presse médicale, October 18, 1913).

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**Hemolytic Action of Adrenalin.**—Adrenalin has a relatively strong hemolytic action which is not caused by chloretone contained in the solution, but is due to a specific action on the adrenalin. This action is probably not dependent on temperature and is transient. With the appearance of hemolysis on mixing adrenalin with defibrinated blood the mixture becomes brownish red. This coloring is due to the fact that the adrenalin acts on hemoglobin when it is freed upon destruction of the blood-

corpuscles, and forms methemoglobin. The hemolytic action of adrenalin is much weaker than that of corrosive sublimate after a certain period of time has elapsed, but within this period it is much stronger than that of sublimate.

Addition of adrenalin hydrochloride to an emulsion of rabbit's blood causes a marked hemolysis, and a certain proportion of the blood-corpuscles are dissolved within a few seconds, even in 1:2000 dilution. S. Kariya and H. Tanaka (Journal of Tokyo Medical Association, vol. xxvi, No. 20, 1913).

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**A Lipoid from the Anterior Lobe of the Pituitary.**—The author extracted from the anterior lobe of the pituitary a lipoid which, injected into rabbits for a certain period in daily doses of 0.005 Gm. (⅓ grain) per kilogram of animal, induces the following phenomena: Constant restlessness, pugnacity, polyuria, and polyphagia. Bodily growth was manifestly enhanced in rabbits about 4½ months old.

Administration of this lipoid to man, hypodermically, causes at first a temporary acceleration of the pulse, slight diuresis, increased appetite, and especially, in asthenic subjects, a manifest increase in the working capacity. In patients with myocardial disease there is noted after a certain time a rise in the blood-pressure and a regularization of the heart action. H. Iscovesco (Société de Biologie, Paris, November 29, 1913; Semaine médicale, December 10, 1913).

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**Action of a Lipoid Obtained from the Thyroid Gland.**—The author reports experiments showing that a lipoid extracted by him from the thyroid gland strongly excites the adrenals, ovaries, uterus, and testicles. It stimulates the heart more strongly in females than in males. It slightly excites the spleen, excites the kidneys only in males, and strongly excites the thyroid, more in females than in males. The author points out that a given internal secretion produces slightly different effects, according to the sex. The thyroid lipoid referred to was found to regularize growth in the very young, to accelerate it slightly in growing subjects, and to cause a loss of weight in adults. H. Iscovesco (Société de Biologie, Paris, November 8, 1913; Presse médicale, November 12, 1913).

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**Experimental Hypophysectomy and Polyuria.**—Report of experiments in which almost or quite complete removal of the pituitary was effected in 5 dogs. The animals thereupon developed a copious polyuria, without glycosuria. The polyuria appeared in the twenty-four hours succeeding the operation and lasted a variable period. These findings parallel the observations made clinically, where simple polyuria or polyuria with glycosuria is rather frequently noted in the presence of hypophyseal syndromes, as indeed also in other disorders involving the base of the brain. J. Camus and G. Roussy (Société de Biologie, Paris, November 29, 1913; Semaine médicale, December 10, 1913).

**Penile Vasodilator Action of Prostatic Extract.**—Prostatic extracts were made from the ox, a healthy young man accidentally killed, and from 2 surgically removed hypertrophied prostates. When these were injected into the saphenous vein of dogs an active vasodilatation of the penis followed constantly. It coincided with a fall of arterial pressure and a diminution of the volume of the kidney and the nasal mucosa. The writers failed to obtain any penile vasodilatation from injection of testicular extracts. Incidentally they mention that injections of pituitary extract gave penile vasoconstriction. The writers expect to study the mechanism of the penile vasodilatation produced by prostatic extract, especially as to whether it is a direct action or one dependent on the nerve centers. L. Hallion, L. Morel, and E. Papin (Société de Biologie, Paris, February 28, 1913; Medical Chronicle, July, 1913).

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**Metabolism in the Mentally Diseased.**—In many cases of progressive paralysis, and still more in epileptics, there is found an increase of the lecithin of the blood-serum. That this increase in the lecithin in the mentally unbalanced is a sign of the breaking down of the brain substance is shown by Fauser's discovery—Abderhalden's method—that in the insane the brain substance itself is attacked and disintegrated. In dementia precox a marked decrease in the initiative takes place in the vast majority of cases. The author is inclined to correlate this with the disordered functioning of the sexual glands, and explains it as a pathologic intensification of a condition that accompanies normal puberty. A. Bornstein (Münchener medizinische Wochenschrift, September 9, 1913).

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**Is the Pituitary Indispensable to Life?**—After carrying out numerous hypophysectomies, in some instances controlled by microscopic verification, the authors came to the conclusion that it is not possible for animals to survive after complete pituitary removal. Only if some remnant—even if only microscopic in size—is retained do the animals continue to live. Operative shock could be excluded as the cause of death in these experiments. Section of the pituitary stalk is not in itself lethal, if portions of active pituitary tissue are allowed to remain. G. Ascoli and T. Legnani (Archives italiennes de biologie, vol. lix, No. 2, 1913; Zentralblatt der experimentellen Medizin, February 15, 1914).

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**Epinephrin Content of the Blood in Certain Psychoses.**—The author studied 17 cases, seeking to ascertain the epinephrin content of the blood in certain psychoses of the general character of imbecility and idiocy. In 11 of the cases of this type there was a considerable diminution in the amount of epinephrin in the blood; in 3 a very great diminution, and in 3 only did the amount reach the normal. The study was made also in 4 cases of senile psychoses. In 2 of these no alteration from the normal amount of epinephrin was found; and in the remaining 2, the same condition probably existed. Certain deductions regarding the relation of

hereditary influences to idiocy are made in connection with the amount of epinephrin in the circulating blood. M. Kastan (Archiv für Psychiatrie, vol. L, No. 21, 1913; Post-Graduate, January, 1914).

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**Epinephrin in the Treatment of Erythema.**—The vasoconstrictor property of epinephrin was taken advantage of by the author in 3 cases of erythematous taches of the face ("red nose"), 2 of the patients being young men, and the third a young lady. A solution of epinephrin hydrochloride, 1:1000, was given internally in 5-minim doses in water three times daily half an hour before food, and the treatment continued during five to six months with short intervals. The erythema almost entirely disappeared, and a year and a half after treatment it had not reappeared. No bad effect on the heart or blood-pressure was observed. Rothmann (Lancet; Charlotte Medical Journal, October, 1913).

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**Pituitary Treatment of Hemorrhage in the Respiratory Tract.**—In view of the current use of pituitrin in obstetrical practice for the purpose of combating uterine hemorrhage the author took up its use in the treatment of epistaxis of varying causation and in postoperative hemorrhage in the respiratory tract, in particular after turbinectomy. The remedy was injected subcutaneously or intramuscularly a half-hour before operation and, if necessary, afterward. Excellent results were obtained. Citelli (International Medical Congress, London, August 6-10, 1913; Revue hebdomadaire de laryngologie, d'otologie et de rhinologie, December 20, 1913).

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**Epinephrin Glycosuria in the Frog.**—Having noticed in experiments on epinephrin glycosuria that the epinephrin passes into the urine and reduces the copper solution, the author was led to suspect that this source of error might have crept into all previous experiments in this direction. He therefore investigated the subject anew, using tests for glucose other than Fehling's, and was able to confirm previous observations that the urine in frogs contains glucose after injections of epinephrin. C. Gautier (Société de Biologie, Paris, November 8, 1913; Presse médicale, November 12, 1913).

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**Abderhalden Ferments in Exophthalmic Goiter.**—The author sought, by the Abderhalden method, ferments destructive to various organs in 6 cases of Basedow's disease. The reaction against normal thyroid gland was almost uniformly negative—5 out of 6 cases. In the case of the ovary and thymus it was very frequently positive. In 3 out of 6 cases there were found in the blood antibrain ferments, doubtless an expression of involvement, primary or secondary, of the nervous system in this disease. Léri and Foley (Société de Neurologie, Paris, January 8, 1914; Paris médical, January 24, 1914).

# Department on General Medicine

## Original Article

### SOME COMMON ERRORS IN NEUROLOGIC DIAGNOSIS AND TREATMENT.

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THE fundamental error too common in contemporary therapeusis, happily passing away now, is the striking at the symptoms. It is the groundwork upon which is built the nostrum evil. These compounds make appeal only to physicians versed in nothing but pharmacodynamics, and poorly versed at that.

Pathogenesis teaches better. That one knows how to slow a rapid heart does not prove the desirability of such slowing for the patient's sake. A pained abdomen does not command an opiate, but rather surgical intervention. Is there any more reason why a pained cerebrum should demand an opiate? Stupefaction by sedatives is no better treatment in nervous cases than in surgical. The difference between the two groups of cases is that surgical pathology is understood by many, while neuropathology, and above all psychopathology, is hardly even sensed save by a few.

A few examples of changed practice will make clear the point of view required in current practice in order to save the numerous nervous wrecks resulting from the exceedingly bad therapeusis now so common. If, as has been said, mistakes are more instructive than successes, there need be no apology for discussion of a few in the admittedly fallacious field of neurologic practice.

*Symptomatic Treatment.*—In neurology, typical examples of the errors due to survival of that conception of medicine which, ignorant of causes and mechanism of disease, sought to neutralize symptoms are afforded by the belief that an excitable person should be given bromides, the symptom of excitement being met by a depressant; or that one who feels below par should be given stimulants, of which strychnine is usually the first suggested, —although a moment's reflection should show the absurdity of treating by a purely spinal excitant an inadequacy of the higher neurones of the cerebrum in a patient with lower neurone reflexes already exaggerated. Even should a patient suffer from inadequate spinal activity, the practice would still be just as bad, as everybody would now know enough to condemn the indiscriminate giving of opium in painful affections within or without the abdomen, or the giving of purgatives for intestinal obstruction. The perniciousness of these practices stands to the reason of one who thinks in

terms of pathology. But it actually required years of application of the experimental method of trial and error before surgical method superseded these evil practices.

*Indiscriminate Electrical Applications.*—An error almost as common is the application of some modality of electricity to patients with what is loosely called functional nervous disease. The procedure of the physician who does this has no better standing than that of the unqualified practitioner whose existence we all deplore. He forgets, if he ever knew, that the inadequacy of a patient's response to environment by means of his nervous system may originate from a bodily disorder the treatment of which has nothing to do with the nervous system at all. The apparent relief of the patient may even be due to suggestion, just as in much of the practice of the charlatan. Those who are unconvinced by this example have only to apply what I have said about chronic disease to some acute disease. In typhoid fever, for example, the interference with nervous function is invariable, even the reflexes being modified in most cases, while the cerebral symptoms gave their name to the disease. It is a functional nervous disorder if the term has any meaning; and yet no one pretends to treat the nervousness of a typhoid patient by the unthinking empiricism so often applied to chronic conditions.

It is the prevalence of this unenlightened empiricism which prevents us from convincing legislators and other laymen of the essential difference of the science and art of medicine for which we stand in contrast with the practice of osteopathy, chiropractic, optometry, Christian science and similar attempted short cuts to the relief of suffering. An instance will show the point:—

A man was referred me by Dr. Wingerter, of Wheeling, W. Va., because of an increasing incapacity to manage his limbs; this had progressed to a point where his work as dentist was impossible. He had been treated for several months by electricity and later by massage applied by an osteopath. *No diagnosis had been made.* These measures were therefore a waste of time and money, for the man had amyotrophic lateral sclerosis, a progressive disease usually fatal in two years through paralysis of the muscles of deglutition and respiration.

*Failure to Detect Tabes Dorsalis.*—An error of this type is particularly common in another, but much more hopeful disease in which the spinal cord is affected. A clinical example will make the point clear:—

A school teacher, whom I saw in 1912, in consultation with Dr. Judther, of Webster Springs, W. Va., suffered for some years from recurring pain and numb feelings in the legs. These pains were believed to be rheumatic, because they seemed sometimes to be relieved by salicylates and were greatly improved by a few months at a watering place. That she became less able to perform her work was attributed to the stress of the teacher's life and so-called "general tonics" were prescribed. She went to Clifton Springs not long before I saw her and was there treated by a series of baths and exercises, alternated with rest. No diagnosis was made; yet it is not conceivable that her symptoms of five years' duration had not for some time been accompanied by ascertainable physical signs, for when I saw her last summer the deep reflexes were everywhere absent, the pupils did not react to light, the sensibility of the lower limbs was seriously impaired, and there was some inco-ordination. Of course, the diagnosis

was tabes dorsalis. Appropriate treatment[1] has enabled the young woman to recover weight and strength, and she is now performing her work more satisfactorily than for five years past. I hear that she is now quite well.

Because of space limitations, other cases are not here published, but it may be stated in general that rheumatism for lightning pains, asthenopia for paretic strabismus, gastric ulcer for tabetic crises, and even tuberculosis for laryngeal crises and cystitis for tabetic bladder are not uncommon errors. The Wassermann serodiagnosis is of but little help; for in fully 40 per cent. of tabetics, the reaction is negative. The clinical diagnosis is thus the paramount means still.[2]

Of the same type is the error of diagnosis and treatment which leads a practitioner to treat as nervous dyspepsia merely symptoms of remittent discomfort, flatulence, and pain in the abdomen, with general nervousness.

*Nervous Dyspepsia Erroneously Diagnosed.*—A case in point was that of a powerful man—referred in 1912 by Dr. Burch—6 feet 2 inches in height, who had lost 40 pounds in weight and suffered from insomnia, great irritability of temper and great discomfort after eating. He had greatly restricted his diet on account of a diagnosis of nervous dyspepsia. When he was first referred to me, eggs and milk were his main sustenance. Different medical men had rung the changes upon alkalies, acids, stomachics, and adjuvants of various kinds. Besides these, sedatives had been given freely; so much so that his fatiguability was extreme and he easily became lachrymose. For those who employ it, the diagnosis "abdominal neurasthenia" would have been ready. Physical examination, however, showed in the first place great exaggeration of the deep reflexes, a tachycardia of 110, and a fine tremor. Great variability of the blood-pressure at different examinations was also revealed, and excessive perspiration was easily provoked, while emotivity was a prominent feature of the case. This was not of the psychogenetic type, for the only possible agent revealed by psychoanalysis was an apprehension lest his condition might have been provoked by the excessive venery in which he had indulged until about two years before. Further analysis showed this not to be the source of his anxiety, which in so far as it was psychologic was the natural response to the morbid feelings produced by his grave physical condition.

In spite of the absence of ocular signs and of thyroid enlargement, the case was declared to be one of hyperthyroidism plus pluriglandular dystaxia. The dyspepsia was just as secondary as were the other symptoms. Although we do not know the etiology of this disease and are obliged to resort to empirical treatment, yet it is more rational to apply the latter to the more primitive disorders than to such secondary effects as dyspepsia, nervousness, insomnia, sweating, exhaustion, or tachycardia. Accordingly, the dystaxic glandular apparatus was exercised by stimulation of the cutaneous surface through changes of temperature by means of water, this being followed by periods of repose for the maintenance of adjustment during freedom from stimuli, physical or psychologic. A balanced dietary was also imposed, and the man's anxiety about himself allayed as much as possible. The therapeusis was difficult, but finally succeeded, and the man is now at work, free from symptoms, although not quite up to weight and still a little abrupt in his reactions.

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[1] This case will be published among two score to illustrate the correct, *i.e.*, antisyphilitic, treatment of tabes dorsalis which I have practised and repeatedly urged for seven years, thanks to the work of Nageotte. Nowadays even the most unthinking follow this treatment, which they so long mistakenly opposed.

[2] See case in Va. Med. Semi-Monthly, Dec. 21, 1912.

A diagnosis of nervous dyspepsia, too, is the usual fate of patients in the early stages of pernicious anemia. A proper examination of the blood would, of course, obviate this error.

In pellagra, likewise, remittence of the gastrointestinal symptoms leads to the same erroneous diagnosis and treatment on the part of clinicians who think only in terms of symptoms to neutralize.

*Nervous Dyspepsia Diagnosed in a Case of Pellagra with Spinal Sclerosis.*—A woman about 48 years of age was seen with Dr. Cobey, of Frostburg, Md., in October, 1912. She gave a history of long-standing nervous dyspepsia and anemia. Recently she had become progressively weaker until locomotion was impossible without assistance. Glossitis, varying in severity, was said to have lasted four years. She had been treated for years for dyspepsia, and pernicious anemia had lately been suspected, but the characteristic blood-picture was stated not to have been present. Syphilis was then thought of, and a mercurial course given without benefit.

Upon examination, the tendon reflexes proved all absent except those of the right arm and the left radius, which were very feeble. The plantar reflexes were feeble also, and the pupil reflexes, though brisk, were not maintained. Tingling and numbness in the hands and feet annoyed her.

Sensibility to pin prick was lost below the knee except on the fibular border of the feet, where it was feeble, as also in the thighs. Touch and vibration were lost and impaired in the same regions, respectively. Attitude sense was lost only in the ankles. Pressure pain was everywhere exaggerated. The temperature sense was not tested.

Motility was much weakened in the whole of the lower limbs, especially so in dorsiflexing the feet. The left triceps was weaker than the right. But the patient was feeble in general. The gait was shuffling and unsteady and she fell readily when unsupported. Ataxia was absent.

Nervous dyspepsia should be diagnosed only when its genesis is psychologic; and this can be found out only by a proper analysis of the patient's case.

*Neuritis Erroneously Diagnosed.*—A most common error is a diagnosis of neuritis because of the presence of local pain, especially when this is increased by movement or pressure. One such case I described fully before the Medical Society of Virginia in 1910.[3]

The pain in the right arm from which this young woman suffered was due to the dragging upon the muscular attachments caused by the tension of her muscles produced by an occupational psychogenetic writers' cramp, of which I cured her.

An occupational pain in the shoulder was similarly the cause which led a young male stenographer, supposedly neuritic, to be sent me last spring, by Dr. Noble Barnes. Actually, the pain did not arise from irritation of the nerves in the arm. Nor did it come from a psychologic source, as in the case of the last patient. The fact that it was allayed by rest, which is really no proof of a so-called neurosis, arose from its production by a traumatic lesion of the connective tissues, including the subacromial bursa.

Local neuritis is an unusual disorder except when the direct result of local trauma or infection. General infection or intoxication produces a general neuritis, the physical signs of which are well known and unmistakable.

[3] Trans. Med. Soc. Va., 1910; New York Med. Jour., Jan., 1913.

The attribution of chronic local pains, *without proper examination,* to neuritis is as reprehensible as their attribution by the osteopaths to a spinal displacement.

*Errors Relative to Hysteria.*—It is not possible for me to cover a tithe of the disorders concerning which the fundamental error of thought already spoken of is rampant; but I must allude to hysteria in this connection in order to say that emotivity is not hysteria,—nor is capriciousness nor fantastical behavior nor mere foolishness. The treatment of such symptoms in the belief that they are hysterical is doomed to failure. Hysteria is perhaps the only disease of mental *causation,* and of which the treatment must be purely psychologic. It is essentially quite simple. The prevalent belief in its essential multiformity is an error accountable for the apparent difficulty of its therapeusis, which is in reality quite easy. The proof of this iconoclastic affirmation is afforded by the cases I have published elsewhere,[4] and its theoretical basis, which we owe to Babinski, I have also set forth at length.[5]

A common neurologic error is the confusion of hysteria with psychasthenia, asthenic states, and dementia precox. To general practitioners, such an error is excusable, and it is beyond the province of a general society. But the frequency of the diagnosis of hysteria in cases of gross organic disease must be spoken of. This is particularly common in cases of cerebral neoplasm, especially of the frontal lobes. As I have said, peculiarity of humor is no criterion of hysteria; the symptoms of this are merely those produceable by suggestion, and hence should make us look for some other cause and demand a thorough neurologic examination.

The following case will illustrate:—

*Thalamic Tumor in the Ventricles with Frontal Symptoms.*—This patient was seen with Dr. Roy. Anamnesis could reveal only a marked mental torpor, with an occasional fatuous response, so it was soon abandoned and the physical examination proceded with. There was shown a marked, although equal, exaggeration of the patellar and Achilles reflexes and an absence of the abdominal and cutaneous reflexes. This, of course, was an index of interference with the functions of the precentral gyri, but afforded no localizing information, on account of the absence of inequality on the two sides. The plantar response, however, gave further information; for while it was of the flexor type on the left foot, which showed that the projection fibers were but little affected, there was on the right side, although the great toe flexed, a marked spreading and extension of the four lesser toes. This indicated an interference with the right pyramidal tract of a degree greater than was shown in the left corresponding tract, *i.e.,* if the lesion were supratentorial, it would be on the left side of the brain.

The motility could not be satisfactorily examined, for voluntary movements could not be commanded. Inspection of involuntary movement showed a distinct asymmetry of the face, the left side being more flaccid than the right; but the patient could close either eye independently. The pupils were widely dilated and iridoplegic. There was a drooping of the left side of the palate and an occasional slight deviation of the ocular axes. The grasp was very feeble. There was marked congestion of the eyelids and choking of the optic disks. No deafness was perceptible.

[4] Wash. Med. Annals, Jan.; Post-Graduate, June, 1912.

[5] Internat. Clinics, 1908, vol. iii; Boston Med. Jour., March, 1909; Jour. Amer. Med. Assoc., Dec. 21, 1912.

As the patient could not co-operate satisfactorily, further examination was postponed until the next day. This was done at George Washington Hospital, where she was taken. She was lying in a semicoma, groaning, and restlessly and slowly moving the left arm and leg. The significance of this was not adequately estimated at the time. The pulse was small and not slow. The palate was no longer deviating. Reflexes of the right arm were more active than those of the left, this again pointing to a left-sided lesion. There was an exudate in the left of the disk.

The following day the facial paresis had disappeared. There was no longer extension of the outer toes. The arm movements were less. The disk was not more choked. She appeared to see better. She was more collected, and said that there was pain in her forehead and slight pain in the occiput. Furthermore, she was able to respond to the test for the diadococinesis, which showed that although the movements were very slight, this function was not impaired.

The papilledema and the coma disappeared; but as no definite focal symptoms appeared then, it was decided not to operate at the time and the patient returned home.

Moria was then the most marked feature of the case. This symptom, consisting of an ill-timed facetiousness of somewhat infantile humor, is regarded as characteristic of frontal lobe involvement; and we believed that the neoplasm might be in the corpus callosum, as there were no convulsions such as are apt to occur as a frontal growth extends backward toward the Rolandic area. There was also an absence of the mutism which occurs in some cases of large left frontal tumor. But the left side could not be decided upon, for while the toe sign and increased right arm reflexes and deviation of the palate to the left pointed to an interference with the left projection fibers, the weakness of the left face contradicted this. However, the excursive movements of the left arm and leg were, as I now believe, erroneously interpreted as part of the general restlessness of semicoma which could not show itself on the right side because of the supposed interference with motility by a lesion of the left frontal lobe pressing backward enough to impair right-sided movements.

Soon afterward, examination showed a positive Brudzinski sign bilaterally. The Kernig angle on the left was 60 degrees, and on the right 70 degrees. The uvula was deviated to the left. The left face was comparatively inert. The right lesser toes again extended on stroking the sole. There was a moderate starring of the right papilla, without bulging or distinct exudate. The inertia of the left face, recurring again, contradicted the other signs, all of which pointed to a lesion of the left side. This appearance of the face may have been due to a general inertia with a relative irritation of the right side of the face; but this was not adequately considered at the time, I regret to say.

Although she was either very somnolent or silly and flighty, on one occasion, although she could hardly recognize people, while being tested for a passing diplopia, she said when I covered the left eye that the left object vanished.

Through a misunderstanding, I was not able to be present at the operation, and Dr. Garr decided to explore the left frontal lobe. Any relief thus given did not improve the symptoms, and the patient died some days later.

*Interpretation of the Symptoms.*—The intense moria was certainly not due to the thalamic lesion found *post mortem*. It is a symptom of impairment of the function of the frontal lobes, and was due to intense pressure of these lobes produced by the damming of the cerebrospinal fluid into the anterior limbs of the lateral ventricles by the blocking of its passages through closure of the third ventricle by the growth in the left thalamus extending across the sagittal plane. Thus, it was a frontal syndrome from which the patient suffered, although the growth was not frontal, but thalamic.

Had the visual fields, however, been carefully explored before the occurrence of the internal hydrocephalus, it is hardly likely that some hemianopsia would not have been found on account of the interference with the fibers leading from the optic tract or those from the calcarine region *en route* to the thalamic region.

Again, an examination of the attitude sense would have revealed a distinct impairment, on account of the interference with the afferent fibers from the spinal cord which find their last relay station in the thalamus before proceeding to the cortex. It is likely, too, that other forms of sensibility might have been impaired in some degree, and an incomplete hemihypesthesia might have been revealed had the patient been examined neurologically before the pressure upon her frontal lobes prevented intelligent responses. The thalamic form of ataxia should also have been revealed had she been able to perform the movements required for ascertaining the defect. But when I first saw the patient, none of these tests could be performed, and the syndrome was an almost purely frontal one, and entirely prevented the diagnosis of the condition which led to it—so that we were helpless, even during the operation.

This case affords another illustration of the supreme importance of a proper neurologic examination of cases of cerebral tumor before the tension has increased so as to prevent co-operation on the part of the patient, and before the focalizing signs have become masked by remote signs such as dominated the picture in this case.

Although in this particular case the tumor was not accessible to surgery, in other cases, especially those in the posterior fossa, the local signs are very readily masked by those remote ones due to blockage of the ventricular circulation.

Above all is it important that patients exhibiting what is often loosely called hysterical behavior should be examined by a competent neurologist, to ascertain if the genesis of their peculiar conduct is really hysterical in mechanism or whether their peculiarities are not those of pseudohysteria from organic defect. I cannot repeat too often that the diagnosis of hysteria should never be made by exclusion, but always, if possible, by its genesis, and if that is not possible, by the form of the syndrome exhibited,—by which is meant the inconsistency of the symptoms shown with those of the topographic arrangement or physiologic groupings characteristic of organic or functional disease arising in the body, as against their consistency with functional groupings comprised under the psychologic rubric, association of ideas.

The reverse error, viz., of diagnosing something else when the symptoms are exclusively hysterical, is also quite frequent, as in my case of hysterical phobia diagnosed as epilepsy.[6] The error is very common in regard to paralysis.

A knowledge of psychopathology is, of course, the remedy; but this knowledge becomes dangerous when it leads to the ignoring of physical conditions in a case which is also hysterical. It must be remembered, however, that the most frequent of all the suggestions of bodily disease is bodily disease itself, and the removal of a hysterical fixed idea concerning one's health is not sufficient in a patient in whom some physical disorder also exists.[7]

[6] Described in Archives of Pediatrics, Feb., 1913, and British Journal of Children's Diseases.

[7] Some of the cases I presented to the District of Columbia Medical Society and published in the Post-Graduate, June, 1912, are of this type.

*Suggestive therapeutics,* which is so much vaunted by some, I consider a *grave neurologic error.* Psychotherapy should be a constructive growth built on analysis, and not a mere imposing of behavior upon the patient willy nilly, through a sidetracking of his attention by electricity, hypnosis, joint manipulation, or religion. An instance follows in which the inefficiency of such procedure is shown:—

A prominent real estate man in one of the larger Southern cities was attacked recently by the condition which precedes and leads to arteriosclerosis. A specialist ordered certain exercises and a dietary. But the real estate man adopted Christian science. He believed himself to be cured, and was obsessed with the idea that "all is God—God is good—all is good." His natural business caution was replaced by an unreasoning and happy-go-lucky optimism. Result—ruin and suicide in four months.

*Sending Patients to Sanitariums.*—Finally, a serious neurologic error is the sending of a patient to a sanitarium for nervous diseases without knowing the class of treatment to be given. A proper diagnosis should first be made, for this will often obviate the procedure of sending the patient to an institution and the stigma it involves. Besides, it is the "man behind the gun" who counts after all.

Longing to put an end to his life, having tried to drown himself and taken laudanum, a farmer's son, aged 24, was sent to a sanitarium. Toward the end of his stay of seven weeks, he crushed and swallowed an electric light globe. He was removed, and immediately drank laudanum again. He was then brought to Dr. Hooe in Washington, who placed him in a general hospital and called a neurologist, who at once began to analyze into the cause of the lad's impulse to kill himself. Less than two hours sufficed to ascertain the cause, which was, in short, that he felt dispirited, and hence ill all the time, because of nagging of the family and others. Too shy to assert himself, he had for a year sunk into solitary dullness, which made him a laughing stock. The result was that the least correction or even suggestion about farm work would be taken as an insult. On one occasion, for example, a neighboring farmer, who wished him to plant the corn differently, was believed by his mother, though the patient knew the neighbor was quite wrong, and he felt all the time he was disregarded or put upon unjustly. His own sheepish attitude, of course, encouraged others to treat him in this way. He once left home to escape from this and worked in California, but did not make a success.

Stated briefly, the condition of his attitude toward the surroundings was his own shame at his erotic fancies and masturbation, which he feared would injure his mind, as other boys teased him about it. The result was that be became ultrascrupulous and intolerant of other boys, which led to the solitude which aggravated his tendencies. He believed now that something was wrong with his brain; but he felt that if he could be cured he would be contented to live.

On this basis, a full explanation was made of the harmlessness of his onanism; the mechanism of his difficulties was explained, and means for overcoming them were outlined. As a result, he went home within two weeks and is now working cheerfully on his mother's farm and even mixing in society, his family having been instructed how to help him instead of harming him, as they had previously done.

The conclusion of the whole matter is: Observe and analyze before treating, especially in neurology, where the pitfalls are so many.

# Cyclopedia of Current General Literature

**Acne Keloid, Etiology and Treatment of.**—The author reports findings, in a careful histologic study of 2 cases, tending to support the early views of Kaposi that the disease is a chronic inflammation and connective-tissue new formation leading by pressure to atrophy of the hair-follicles, sebaceous and sweat-glands, possibly of microbic origin, but not occurring as a reaction to ordinary pus cocci. The most striking known etiologic factor is friction by the collar edge. A combined microbic and traumatic origin seems probable. Microbic infection may or may not be through the follicles, but it is probably neither the acne bacillus nor the *Staphylococcus pyogenes* that is responsible, and the disease is unrelated to acne or sycosis. Neither is it a true keloid.

A notable feature of the disease is its obstinacy to treatment. Most success is obtained with the X-rays, but repeated and large doses are required to produce any impression upon lesions of long standing, so that it is necessary to shield the normal skin when applying the rays to the keloidal swelling. In early cases small, isolated nodules may be excised, and they do not recur if the incision is free of the sharply circumscribed sclerotic mass which constitutes the nodule. H. G. Adamson (British Journal of Dermatology, March, 1914).

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**Acne, Treatment of.**—The author commends sulphur as the best means for keeping the bowels open in these cases. He usually orders equal parts of precipitated sulphur and sugar of milk; the patient is to swallow several times a day as much as will be held on the tip of a penknife. From long experience the author has become convinced that the sulphur, besides stimulating peristalsis, checks putrefaction in the bowels and thus removes the autointoxication maintaining the irritation in the sebaceous glands. He also regards sulphur as the most effective local measure and has the pustules painted at night with a mixture of 10 parts of sulphur, 25 parts of alcohol, and 5 parts of glycerin.

A course of treatment for moderately severe acne should include two or three weeks of general measures, sulphur applied locally and taken internally to regulate the bowels, and dieting—avoiding meat, eggs, cheese, and sugar. The tendency to constipation is frequently not suspected by the patient. Then the author gives a ten- to fourteen- day course of Röntgen-ray exposures, one-third or one-fourth erythem doses being applied at 6 or 8 sittings, to a total of one and a half erythem doses. Four or five weeks after the close of this course he applies the mercury quartz lamp for twenty or twenty-five minutes. Under the inflammation thus induced the skin peels off, the follicle plugs protruding from its inner surface. The skin must be carefully protected for eight or ten days and then carefully gone over with the comedo extractor and auger, any red spots left being treated with sulphur. Three or four weeks of this complete the treatment.

Kromayer (Deutsche medizinische Wochenschrift, October 9, 1913).

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**Alopecia Areata, Treatment of.**—Stimulating and antiparasitic remedies give the best chance of success in this affection, and in early cases there is a fair prospect of arresting the disease. The hair obtains its nutrition from the papilla, and the difficulty of reaching the deeper parts of the hair-follicle by external application must be borne in mind. The best remedies are probably those which keep the skin of the patch in a state of slight permanent irrigation, and this object may be obtained by the daily application of moderately strong irritants, such as tincture of iodine, lactic acid, acetic acid, chrysarobin, sulphur and mercurial ointments. The author has found (1) the B. P. unguentum hydrargyri iodidi rubri (diluted from 4 to 2 per cent.); (2) the unguentum hydrargyri oxidi rubri, with acetum cantharidis, ℥j to ℥j, and (3) equal parts of sodium chloride and petrolatum—used for the treatment of ringworm—serviceable for their antiseptic and stimulating properties. Blistering fluids may be used in the early stages, and the application of pure phenol, as recommended by Bulkley, has often given the writer good results. Any possible cause of peripheral nervous irritation, such as carious teeth, errors of refraction, or aural defects, should be investigated. Internally iron and strychnine, or the glycerophosphates or phosphoric acid, as recommended by Sabouraud, may be given. In severe cases pilocarpine nitrate injected into the scalp every week or fortnight, in doses of $\frac{1}{10}$ to $\frac{1}{6}$ grain, sometimes has a beneficial effect. The patient must be kept in a recumbent posture for some time after the injection. The high-frequency current is serviceable in obstinate cases, and the ultraviolet rays, as obtained from the Finsen or Kromayer lamps, are also worth a trial. When other means have failed, epilation doses of X-rays are sometimes followed by a regrowth of the hair. S. Ernest Dore (Clinical Journal, January 21, 1914).

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**Bismuth Paste as a Primary Dressing for Skin Grafts.**—An ideal dressing for Thiersch skin grafts should satisfy certain requirements, viz.: 1. Secure splinting of the graft to its new bed. 2. Elimination of surface exudation or its rapid removal. 3. Stimulation of epithelial proliferation. 4. Comfort. The more popular forms of dressings — rubber tissue, dry gauze, etc.—satisfy some of these qualifications, but each has objectionable features which nullify, to a great extent, its advantages. The author describes a dressing which has given such complete satisfaction for over two years that he now depends upon it entirely.

On the night before the operation of skin grafting the thighs are thoroughly cleansed and dressed with sterile towels. Under the anesthetic the wounded area and the thighs should again be cleansed with very hot salt solution. The exuberant granulations are now removed with a dull curette or the surface freshened by vigorous rubbing with dry gauze until there is free bleeding. The area is then covered with a towel wrung out of very hot salt solution. This is kept in place, to be removed only as the grafts are transferred from the thigh. These grafts should be so thin

as to be translucent. The tendency to cut them too thick may be partially obviated by using a regular heavy skin-graft razor, which is flat on the under surface and concave on the upper. By a quick, sawing motion the desired graft is removed, leaving an area dotted with pinpoint bleeding, which will heal promptly and does not incapacitate the leg. The grafts thus obtained are laid evenly upon the granulating surface, underlying blood and air bubbles being carefully removed, and then pressed firmly into place by means of a gauze sponge wrung out of hot salt solution. The dressing is then prepared and applied in the following manner:—

Strips of gauze, 6 to 8 layers in thickness, are thoroughly impregnated and buttered with sterile 33⅓ per cent. bismuth paste (Beck's paste). These are laid directly over the newly implanted grafts, smoothly and in order, extending for 2 or more inches beyond the area of the wound. No wrinkles or folds should be permitted to remain. Over these there is placed a layer of absorbent cotton, and the whole dressing held firmly in place by a roller bandage.

The first dressing should be done on the fifth day and at this time, especially, does success depend upon the skill and care exercised in the removal of the primary dressing. A similar dressing is reapplied and subsequent dressings done on every third or fourth day as the case requires. At about the fifth dressing one is able to peel from each graft a thin film of dead cuticle, leaving a firm, pink, healthy graft in position.

The advantages of this dressing are that the grafts are held firmly in place; exudation becomes almost negligible; there is stimulation of proliferation of the epithelium, not only from the edges, but also from the deeper surface, that exceeds by far the effects produced by scarlet red, and, lastly, the patient expresses a sense of comfort frequently absent in the other types. The resultant scar is soft and pliable, and shows no tendency to break down.

The action of bismuth paste, when used in the treatment of large granulating surfaces, was so noticeably beneficial that the author has used it as a routine measure in all granulating wounds. It is used as a primary dressing in burns when it is not possible to follow Rovsing's method, and always as a secondary dressing. F. H. Coerr (American Journal of Surgery, February, 1914).

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**Cancer of the Breast, End-results in Operations for.**—Review of the results of 609 cases of cancer of the breast operated upon at the Mayo Clinic from 1902 to 1912. Of these cases 607 were females and 2 males. Of the 609 cases, the authors were able to trace and have accurate knowledge of 514. Of these, 248 were known to be alive from two years to eleven years and four months after operation. Thirty-seven of these were known to have recurrences. There was a percentage of 32.5 alive without recurrences more than ten years; 39.8 alive more than five years, and 44.7 living more than three years.

Excision of the tumor or a part of the breast, followed by a radical operation within a few days or weeks, does not always mean a bad prognosis. In one case the radical operation was not performed until seven-

teen days after removal of a breast for supposed mastitis, and this patient was living without signs of recurrence seven years and nine months after operation; in another a specimen had been removed one week before the patient came to the clinic, a radical operation was done, and the patient was alive and free from recurrence over six years after operation. Edema in the tissues is considered a contraindication to operation. Cancer in the lactating breast proved most unfavorable.

On the whole, the functional results were very good, most of the patients reporting that their arms were all right. Pain in the arm was usually complained of shortly after operation, but in most of the cases it disappeared within two weeks. Swelling and edema were occasionally marked, either primarily due to thorough removal of the lymphatics, and persisting until collateral circulation in the lymphatics was established, or as a secondary edema several months or years after operation, and due to a recurrence in the remaining lymphatics. Metastasis may occur many years after the operation, though in the great majority of instances it will appear in the first few years, if at all. The difference between the percentage of patients living more than three to five and ten years was not as great as might have been expected; this is because most patients who die of the disease die within the first three, or at least the first five years. Living five years without recurrence is an indication of but slight trouble in the future.

Comparing the results with those of former years, the authors feel that the results are improving. The improvement seems due to the fact that patients are coming earlier rather than to any improvement or change in the technique. E. S. Judd and W. E. Sistrunk (Surgery, Gynecology, and Obstetrics, March, 1914).

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**Determining the Size of the Cervix by External Examination.**—The author's method is based upon the palpation of the contraction ring, which, according to his experience, can always be felt. It is felt two fingers above the symphysis when the cervix is of the size of a dollar, and three fingers above the symphysis when it is somewhat larger. When the cervix is fully dilated the ring can be palpated four fingers above the symphysis and is always horizontal, not oblique, as it is when the lower uterine segment is overdistended. F. Unterberger, Jr. (Zentralblatt für Gynäkologie, January 24, 1914).

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**External Malleolus, Treatment of Fractures of.**—The excision of small fragments of bone involving articular surfaces has given the author such good results in the case of the shoulder, elbow, and wrist-joints that he determined to try it in cases of fracture of the external malleolus. Among the cases presented is that of a woman aged 40 with an oblique fracture of the fibula involving the malleolus. In spite of careful adjustment of the splints the patient complained of great pain, which continued for several days. On the tenth day after the accident the author exposed the external malleolus by a rectangular incision and, after detaching the external lateral ligament, removed the whole of the external malleolus. The foot was placed at a right angle to

the leg and adjusted on a back splint. Next day the patient was comfortable and free from pain. In ten days the wound healed; on the twelfth day she could stand on the foot without pain, and on the fifteenth day went to a convalescent home. Three months later the patient could walk and move about on the injured foot easily, safely, and without pain or stiffness.

This and other cases are good examples of the ease and rapidity with which patients recover after excision of an external malleolus detached by accident. The results are much better than those obtained by the older method of rest or the application of splints, and far better than the repair which follows the newer method of wiring. Sir John Bland-Sutton (Lancet, February 7, 1914).

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**Femur, Treatment of Fracture of Neck of.**—The difficulty of treating fractures of the neck of the femur is in controlling the short fragment. The author asserts that the method advocated in his paper brings the fragments into apposition and secures bony union in a large majority of cases where the old methods are so uniformly followed by failure.

The principle of the method is that by adding a side pull to the Buck extension the resultant of the two pulls is a pull outward in the long axis of the neck of the femur. This renders the capsule of the joint taut and brings the fragments into apposition. The side pull is brought to bear upon the upper end of the thigh by means of a weight and pulley, the pulley being placed opposite the crest of the ilium of the injured side. It can be attached to the wall, a standard, or the side of the bed, and should be so adjusted that the pull is upward and outward at an angle of 45 degrees. The amount of weight at the foot of the bed should be sufficient to overcome the shortening, and the side weight should be about one-third of the foot weight. The author has depended upon the apparatus to adjust the fracture, but the advice of Ruth seems rational. He recommends that the thigh be flexed to a right angle with the body, with the patient on his back; that extension be made directly upward while an assistant makes outward traction upon the upper end of the thigh, and that while both pulls are continued the limb is brought down parallel with the other leg and held in that position until the dressings are applied.

A well-padded splint of surgeon's felt, or sole leather, should be applied to the inner and under sides of the thigh, coming well up to the perineum. This splint is fastened to the thigh by adhesive plaster encircling the limb, and affords a broad surface against which the side pull can be made without chafing or blistering. By means of the side pull the natural tendency to eversion can be overcome. The author finds a band made of several layers of gauze or cheesecloth a convenient material for the side pull. It should be fastened to the splint by adhesive plaster, so that it will not roll up into a cord against the perineum. To the ends of the gauze is attached a rope which goes over the pulley. By shortening the lower arm of this gauze the limb can be rotated inward, thus avoiding the danger of eversion.

One of the advantages of this treatment is that the surgeon can

slip his hand under the knee and flex it a little every day and thus prevent ankylosis. The patient can be allowed, and should be encouraged, to sit up in bed. This can be done without causing pain or disturbing the fracture, because the head of the bone rotates in the acetabulum. The sitting posture adds to the comfort and convenience of the patient and prevents hypostatic pneumonia.

While it is useless to claim that this or any other treatment will procure bony union in every case, since there are persons who have not the required bone-producing power, the author has had but one case, thus treated, in which union failed to occur.

The method described is, of course, not the only one by which bony union of the femoral neck can be secured. Whitman's method of extreme abduction and retention by plaster of Paris will secure bony union, and is undoubtedly the best method for the treatment of children, but it is neither as comfortable nor as convenient as the recommended method for adults. James E. Moore (Old Dominion Journal of Medicine and Surgery, March, 1914).

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**Glaucoma, Treatment of.**—In an acute or subacute attack of inflammatory glaucoma the local treatment should consist of pilocarpine, 2 grains to the ounce, to be used every hour, preceded by as hot a fomentation over the eye as the patient can bear for fifteen minutes. Leeches to the temples are sometimes used, and generally with good effect. Counter-irritation over the brow and temple are equally serviceable. To relieve the trigeminal neuralgia, acetanilide or phenacetin, 4 grains, with codeine sulphate, ¼ grain, may be used every two to three hours. A course of calomel is invariably indicated, to be followed by sodium salicylate, 5 grains, or quinine, iron, and strychnine, three times a day. A good sweat is often of great help. If after twenty-four hours the pain is lessened and the sight is no worse or has improved somewhat, the treatment may be continued until the eye has quieted down partially or completely, when operation will be in order. If, on the other hand, the symptoms are in no wise abated in twenty-four to thirty-six hours, immediate operation is demanded. The ophthalmic surgeon will have to determine whether this shall be the classic iridectomy or one of the modern filtration operations. In absolute glaucoma enucleation has been generally advised, but it is the author's feeling that nearly every one of these eyes may be preserved to the patient (sightless, it is true) by sclerocorneal trephining.

Chronic non-inflammatory glaucoma is a field into which the general medical practitioner has not entered as he should. The bowel, kidneys, and skin should be alternately stimulated, the results being controlled by study of the indican, urobilin, and conjugate sulphates of the urine. The blood-pressure is often significantly increased and is also one of the controls in this study. Diet, exercise, outdoor life,—in a word, rational living,—count for much.

As to the treatment of the eye itself, so long as a patient under thoroughgoing elimination and miotics in the eye can maintain a useful degree of vision without increase of intraocular tension or cupping of the optic nerve head and reduction of the visual

fields, one should be slow to recommend operation. But if in spite of such general and local treatment, the vision continues to fall off to a point where reading of good-sized print becomes impossible and the visual field suffers, with deepening of the nerve cup, one should earnestly urge operation. Sclerocorneal trephining is the best procedure.

As to the proper method of miotic medication: Beginning with 1 grain to the ounce of pilocarpine and ½ grain to the ounce of eserine, the pilocarpine should be used three times during the day and the eserine at bedtime. From time to time the strength of the miotic is increased, enough being used to keep the pupils well contracted. The solutions should be freshly prepared, at least once in two weeks, and filtered each time. The patient is cautioned to keep the dropper clean lest the solution become contaminated. Ocular massage is sometimes of great help.

If the patients will submit to thorough elimination and conscientiously adhere to the miotic treatment, they may often escape operation for many years and sometimes altogether.

As to the operation to be performed for non-inflammatory glaucoma, when such a step has been consented to, one has come to look upon iridectomy with much doubt in recent years, and the modern filtration operations are being given thorough trial. One has a choice of Herbert's or La Grange's modification of sclerotomy, of Heine's cyclodialysis, or of Elliot's sclerocorneal trephining. The latter is by far the safest and most productive of results. In 29 cases treated by this method there were no serious complications at the time of operation in any case. By the trephining method 7 eyes with absolute glaucoma have been preserved to their possessors that formerly would have been removed. In 7 other eyes which were sightly a small degree of vision was gained by the operation, such as hand movements at 1 to 3 feet. In the remaining 15 eyes the results were good, in that the eyes gained considerably in vision and usefulness. The greatest gain in vision after trephining was from $\frac{3}{50}$ to $\frac{6}{12}$, and the least from $\frac{5}{12}$ to $\frac{5}{10}$. Wendell Reber (New York Medical Journal, February 21, 1914).

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**Infantile Gastroenteritis, Bacillus Lactis Bulgaricus in.**—The results obtained by Clock in the vomiting and diarrheas of babies by the administration of the *Bacillus lactis bulgaricus* in tablet form led the author to try the treatment in a series of 55 cases. These cases varied in severity from moderate degrees of infection—6 stools a day—to the most grave—20 and more passages. The diarrheas had been present from one day up to a month or more. From 3 to 10 lactic bacillary tablets a day were given to each infant, according to the gravity of the illness.

Of the 55 cases 16 were breast babies, 32 bottle, and 7 breast and bottle. In 33 there was diarrhea, but no vomiting; in 20 there were both vomiting and diarrhea, and vomiting was present alone in 2 cases. The stools were generally green, watery, or curdy, foul, slimy and in a few cases blood-stained. Some of the patients received no treatment other than the tablets. Seventeen received an initial purge of calomel and castor oil and were kept on barley water for

a time. Saline irrigations were used in 27 cases and bismuth in small doses given with the tablets in 13 cases.

The results obtained were as follows: 43 of the children gained in weight; 2 lost; 3 gained and then later lost, and 7 showed no change. There were no deaths. The temperature regularly came down to the normal within one to three days, except in a few cases in which there was an associated condition such as a bronchopneumonia. Within two or three days after the tablets were used, the stools became yellowish or brown, well-formed, free from curds, mucus, and blood. The number of stools sometimes decreased and sometimes remained unchanged. In the latter case bismuth subnitrate in tablet form was given in addition to the lactic tablets, with resulting marked decrease in the frequency of the passages. Louis H. Schwartz (Medical Record, January 24, 1914).

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**Iodine Applications in Diphtheria.**—Iodine ointment was used by the author in 30 cases of diphtheria and 19 of scarlet fever, as well as in 10 other cases of septic throat of varying origin and degree. He employed 3 cotton pledgets, 2 to remove secretions and false membrane and dry the surface as far as possible, and the third, well smeared with the ointment, to be rubbed on the affected surface and the surrounding area. This was done every three hours, or in severe cases every two hours, until improvement occurred. Under this treatment many cases of diphtheria cleared up within a few hours, becoming quite free from false membrane on the second or third day. The septic cases also promptly recovered, and the scarlet fever cases were unusually free from local complications. The treatment is advantageous, especially in children, in being in no way unpleasant to the patient. A. Harrison Thomas (British Medical Journal, January 10, 1914).

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**Jackson's Pericolic Membrane.**—Jackson's pericolic membrane is of congenital origin and is non-inflammatory. It occurs in association with abnormal mobility of the proximal colon, due to a failure of fusion of the ascending mesocolon with the posterior parietal peritoneum. The great omentum, from which Jackson's membrane is derived, is the most primitive agent in fixing the proximal colon to the parietes in the right loin. In cases of mobile proximal colon Jackson's membrane may be the principal means of fixing the colon. Unless it causes kinking of the colon a pericolic membrane is therefore rather useful than harmful, and should not be divided. The symptoms and pathologic conditions found in association with Jackson's membrane (apart from mechanical obstruction due to the membrane) are primarily due to stasis in the abnormally mobile proximal colon, which is ill adapted to the upright posture. Surgical treatment should be directed to securing the normal position and fixation of the proximal colon by the operation of colopexy. John Morley (Lancet, December 13, 1913).

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**Localized Tenderness in Surgical Affections.**—In estimating the condition of localized tenderness in surgery, there is a very simple procedure

by which these examinations may be made to elicit very much more definite information than can be had by the usual pressure of the hands or the fingers. All that is required is a common lead pencil with a rubber eraser at the end. The examination is made by placing the pencil perpendicular to the part to be examined, with the rubber end in contact with the skin, when, after gaining the patient's confidence and co-operation in announcing the degree of pain on pressure, the pencil is firmly pressed down upon the point of contact. A point ¼ or ½ inch from this spot is next examined with the same amount of pressure, and the comparative degree of tenderness elicited is noted. This is repeated at various points, covering, in a more or less symmetric manner, the entire area of the sensitive region. The distinctness with which the outlines of a true surgical local tenderness can be mapped out and limited by this method is a revelation to those who have never applied the test. For example, a tenderness in appendicitis which by palpation is located over an area of, say, 2 by 4 inches may, by this means, be distinctly localized to an area of about 1 by 2 inches. Not only are the limits of the pathologic condition thus more clearly defined, but the contrast between the sensitive and the normal areas is very much accentuated. In other words, the sum total of the tenderness found on palpation always consists, to a certain extent and sometimes to a large extent, of the pain induced by the displacement or the crowding of the surrounding organs or tissues against the point of disease, or of the sensitiveness due to the manipulation of the overlying soft parts. The tenderness from these factors is reduced to a minimum in the examination by this method. If a contused extremity be grasped and squeezed in the full hand, considerable pain will be induced, whereas local pressure of the pencil, even though it be sunk deeply into the contused area, will, on account of the absence of the tissue crowding, produce practically no pain. If, however, in pressing over a contused area, the pencil comes down upon the line of a fracture of a bone, or upon the point of rupture of a ligament, very decided and definitely localized tenderness will be evident.

The practical application of this "pencil-tenderness examination" finds its most valuable use in the early detection of appendicitis, at the time when it is most important and most difficult to differentiate a simple bowel disturbance from a beginning appendicitis. The indefinite sensitiveness here, under the pencil test, seems to disappear in the former case, and to become concentrated at the appendix in the latter.

Not only is the detection of doubtful fractures greatly facilitated, but the actual line of the fracture can often be very clearly demonstrated by this test. For fractures of the small or the superficial bones it is desirable to cut the rubber end into a flattened edge for more definite localization. The differentiation between a ruptured ligament and a simple strain of a joint is usually very evident on the application of the test, as is also the differentiation of simple contusions of the scalp from those accompanied with fracture of the skull. Roland Hazen (American Journal of Surgery, February, 1914)

**Maxillary Antrum, Diagnosis of Disease of.**—Among the aids to diagnosis of disease of the antrum of Highmore, one of the most valuable is the use of some form of suction apparatus. The nose should first be well cleared out with some alkaline solution, and then sprayed with cocaine and epinephrin until all the parts, particularly the region of the middle turbinate, can be well seen. Sometimes a drop of pus can be observed exuding from the natural opening of the antrum, but in the majority of instances the nose appears wholly clean. In the nostril of the diseased side then is applied a suitable nasal tip leading into a suction bottle—the latter connected with an ordinary filter pump attached to a spigot—and suction begun and increased until the patient feels a sensation of drawing within his nose. The process can often be assisted by having the patient swallow, when the soft palate will be brought into contact with the posterior pharyngeal wall. The suction is to be kept up for four or five minutes even if there is no drainage into the bottle. Often on examination one can see the pus coming from one of the natural openings of the sinus. Sometimes treatment of this kind, if the opening remains patent, is sufficient to cure the condition without any operative interference. Harold Hays (American Medicine, March, 1914).

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**Os Calcis, Sprain Fracture of.**—Fracture of the os calcis may occur by direct or indirect violence. In the former event, there exists what has been called a compression fracture. The subject usually has fallen from a great height and landed on his heels. The os calcis is fixed between the malleoli, the astragalus, and the ground. The energy of the fall is expended directly at the point of fixation, the fracture resulting. Frequently the bone is broken into more than two fragments, or shows extensive comminution. In the fractures due to direct violence, the avulsion type of fracture, the same fixation occurs, but in attempting to prevent the injury, at the moment of falling the patient unconsciously contracts his calf muscles so powerfully that the posterosuperior portion of the os calcis is torn away. In some cases the bone is stronger than the tendo Achillis, and the tendo Achillis itself is ruptured. This is much the more uncommon lesion. The case reported by the author could neither be considered as a fracture of the os calcis nor as a ruptured tendo Achillis, but as a lesion intermediate between the two, the tendo Achillis together with a thin bony segment having been torn from its attachment to the os calcis. A. O. Wilensky (Medical Record, March 7, 1914).

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**Pulmonary Tuberculosis, Guaiacol in.**—The author considers that abandonment of the use of guaiacol in lung tuberculosis was unjustified. He states that: (1) It was not given in large enough doses; (2) it was not continued for a sufficiently long period; (3) it may not have been possible to administer the drug regularly. Intervals of only a few days in its administration have a prejudicial effect on its action. It is necessary to give large doses. Beginning with doses of 5 minims (0.3 c.c.) three times daily, he increases the dose by

2 minims (0.12 c.c.) a week up to 12 or 15 minims (0.75 to 1 c.c.), and continues the drug for four months or longer, obtaining highly satisfactory results therefrom. The drug being taken immediately before food, no digestive disturbance resulted from the long-continued use of these large doses. The following formula was used:—

℞ Guaiacolis, f℥j (4 c.c.).
Alcoholis,
Syrupi limonis, āā f℥j (30 c.c.).
Spiritus chloroformi, f℥ij (8 c.c.).
Aquæ, q. s. ad f℥vj (180 c.c.).
M. Sig.: One-half ounce three times daily.

Detailed histories of 5 of the cases thus treated are given. The treatment is recommended to practitioners for trial. G. E. Mayberry (British Medical Journal, January 10, 1914).

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**Pulmonary Tuberculosis, Radiography in the Diagnosis of.**—The gross lesions of pulmonary tuberculosis give a characteristic appearance in the radiograph. The diagnosis of pulmonary tuberculosis by the radiograph must be based on the localization of definite areas of increased density. In the vast majority of cases the radiograph will demonstrate any lesion that the physical examination will reveal. It will demonstrate much more accurately the extent of involvement than any other diagnostic agent. In determining the operability of a surgical condition in a patient suffering also with pulmonary tuberculosis or in giving a prognosis in a known case of pulmonary tuberculosis, the radiographic examination is essential. In border-line cases the Röntgen ray cannot determine the activity of a tuberculous process. No conclusions can be drawn from the shadow of the hilus in the adult. Malpositions and distortions of the shadows of the diaphragm or heart are rare except in cases of pulmonary tuberculosis of long standing, and little or no significance should be attached to them. A. B. Moore (Interstate Medical Journal, March, 1914).

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**Pyloric Spasm, Treatment of.**—As regards the treatment aimed at the immediate and direct relaxation of the spasm, but few remedies are as yet known that act especially upon the vagotonic fibers of the pneumogastric to induce relaxation. Among the agents that may be used rather specifically is atropine, given in full doses. This drug, in a certain proportion of cases, cuts out the vagotonic element in the pyloric spasm and relieves the condition as by magic. Another agent which the author has been led to try experimentally, and in a number of cases with remarkably satisfactory results, is epinephrin. Physiologists have found in animal experiments that epinephrin brings about an instantaneous although rather brief relaxation of the stomach, making it for the time being atonic, except that it seems not to affect to the same degree the sphincters of the pylorus and cardia. Notwithstanding this exception, the author tried epinephrin hypodermically in a case of painful pyloric spasm; the relief was prompt, and, somewhat to his surprise, lasting. Since then he has repeated the trial in several cases; the measure did not uniformly succeed, but in most, and

these the most characteristic, it gave complete relief. In two the spastic pylorus was palpable and the tumor could be felt to melt away under the hand in a most gratifying manner, the symptoms coincidently disappearing. The author also refers to the happy effect of prolonged gastric lavage, using water at a temperature of 105° F., in relieving spasmodic conditions of the stomach. C. G. Stockton (Canadian Medical Association Journal, December, 1913).

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**Renal Function, Simple Method of Testing.**—The author calls attention to the ease with which the renal function may be tested with phenolsulphonephthalein by noting the time of the appearance of the dye in the urine after injection, and the duration of its presence there. In his method the patient first drinks 2 glasses of water, after which 1 c.c. of a solution containing 6 mg. of phenolsulphonephthalein is injected into the lumbar muscles. The urine is passed or drawn into a vessel containing an alkaline solution every five minutes after the injection until the distinctive color of the dye is observed, and every hour afterward, counting from the time of the injection, until the color is no longer present in the urine.

Four numbered bottles are provided in which these specimens are placed for later examination, when their contents must be made alkaline, if not already so, by the addition of sodium hydroxide solution.

In normal cases the dye should appear in the urine in from five to ten minutes. By the end of the second hour about 80 per cent. should be excreted, leaving only 20 per cent., which is usually excreted within the third hour. The bottles of urine should therefore be colored as follows: 1 and 2, deeply colored; 3, pale; 4, uncolored.

In abnormal cases the first bottle may be pale or uncolored by the dye. The second, third, and fourth bottles may be colored with a pale or a deep tint, depending on the rapidity of excretion. In the severe cases, especially in interstitial nephritis in which uremia is impending, the first bottle may be uncolored urine, the following ones all having the pale tint due to slow excretion.

The principal adverse criticism of this method has been its alleged inaccuracy. There is so much variation, however, in the secretion of normal kidneys that a percentage of 50 per cent. is also pronounced normal. Accurate instrumental measurement (by the colorimeter) is really only necessary when the excretion is very slow. W. A. Frankland (Washington Medical Annals, March, 1914).

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**Spasmophilia in Children, Treatment of.**—The author recommends a combined treatment of spasmophilia with phosphorized codliver oil and milk curds from which the whey has been removed by washing with water, thus removing all mineral salts. He gives histories and tables for 12 cases in which a cure was obtained by this method—in 9 within a week, twice at the end of the second, and once in the fourth week. The electrical reaction returned to normal. There was loss of weight under this diet, but this was never so great as to be alarming, and it was soon compensated for on

return to the full milk diet. Bernheim-Karrer (Monatsschrift für Kinderheilkunde, vol. xii, No. 8, 1914).

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**Vaccination and Sore Arms.**—In spite of precautionary measures, sore arms are still of too frequent occurrence, owing principally to the fact that most physicians simply vaccinate and leave subsequent treatment to the patient. Pustule formation is not an essential of the immunizing process, and it is desirable to prevent pustule formation. Dyer recommends the opening of the vesicle with a pair of sterile scissors, painting the base of the vesicle with a solution of silver nitrate or pure phenol (followed with alcohol), and putting on a sterile dressing. The authors have found that the use of phenol causes a somewhat more severe local reaction and a larger eschar and crust than is desirable. They did not find, as Dyer reports, that it prevents secondary infection, and have tried instead the use of tincture of iodine, applying it to the vesicle as soon as possible after the latter has formed and repeating the application two or three days later. By this method they succeeded in either preventing pustule formation or so limiting it that the several pustules which formed did not coalesce. As a result, the vesicles would soon dry up and form a small, dry scab. In not one of 116 cases so treated was there secondary infection with pus-producing bacteria, whereas in those not so treated about 30 per cent. were secondarily infected. In many of these, to be sure, the pus formation other than that of the pustules of vaccinia was but slight.

The use of tincture of iodine accomplishes, the authors believe, two desirable purposes: 1. It destroys the vaccine virus in the superficial lesion —the vesicle or pustule—and thus prevents any further superficial necrosis. 2. It destroys the pus-producing bacteria which may have gained entrance and thus prevents secondary infection. There is no interference with the immunizing process because: 1. With the iodine treatment, there is no diminution of the reaction, as indicated by redness and swelling of the subcutaneous tissue and by constitutional symptoms. 2. The germicidal action of the iodine is limited to the superficial tissue, probably not extending much below the epithelial cells, whereas the vaccine virus has, no doubt, thoroughly invaded the underlying connective tissue. 3. There is no evidence to indicate that the antibodies which produce immunity are formed by the epithelial cells, but there is much evidence to show that they are produced by other cells of the body which are not destroyed.

According to the method of the authors, when a dry scab has formed with no evidence of pus beneath it, no more iodine is applied. The scab should, however, be kept covered with sterile gauze for several weeks and the patient instructed to return if there is evidence of pus formation. In cases of secondary infection with pus formation best results are obtained by removing the scab and pus, painting the base of the ulcer with tincture of iodine and, when dry, covering it with bismuth subiodide powder. Superfluous granulation tissue is treated with a stick of silver nitrate. Henry Albert and A. M. Alden (Iowa Medical Journal, April, 1914).

# Clinical Summary

**Practical hints from articles and abstracts that have appeared in the Monthly Cyclopedia and Medical Bulletin during the current year.**

**Acne.** TREATMENT. Acne vulgaris in childhood or adolescence responds well to thyroid treatment. Thymus employed with advantage in cases with enlarged thyroid and rapid heart. *Morris.* Page 11

**Acromegaly.** TREATMENT. Case of acromegaly in which thyroid treatment caused headache, dizziness, vomiting, and melancholia to disappear, while pituitary treatment always caused their return. *Salomon.* 30

**Amenorrhea.** TREATMENT. In amenorrhea, flooding, dysmenorrhea, etc., mammary extract treatment often proves corrective. *Berkeley.* 20

In amenorrhea, relative or absolute, ovarian extract considered best remedy by author. *Bandler.* 91

**Anemia.** TREATMENT. Joint administration of ovarian extract with iron and arsenic in anemias, including chlorosis, in females, recommended. *Bandler.* 91

**Angina Pectoris.** TREATMENT. Concussion at level of seventh cervical vertebræ, together with hypodermic injection of 1/10 grain (0.006 Gm.) of pilocarpine, to increase vagus tone, gives relief more promptly than does morphine. *Jarvis.* 160

**Ankylostomiasis.** TREATMENT. Betanaphthol in 30-grain (2 Gm.) doses given the first thing every morning is likely to prove more effectual than eucalyptus or thymol. Starvation of patient during such treatment is unnecessary; in bad cases it may be harmful. *Keith.* 165

**Arthritis, Chronic.** TREATMENT. Injections of phenol-camphor used with benefit. Must be made only into joint, never into spongy bone. Formula: Phenol, 30; camphor, 10; alcohol, 30. Only 0.5 or 0.25 c.c. is injected at one point, except in streptococcic processes, where 2 c.c. are necessary. *Pohl.* 235

**Arthritis Deformans.** TREATMENT. Gradual but permanent improvement noted in a number of cases after administration of thymus extract. Pain and swelling disappear and appetite returns. Nucleoproteid extract much preferable to crude gland. Treatment should cover several months, and small doses be continued for some time after apparent cure. *Berkeley.* 20

**Bronchitis, Acute.** TREATMENT. Inhalations of recently prepared tincture of iodine from wide-mouthed bottles found to cure bronchial catarrhs in four days. Inspirations —from 4 to 8 or more at each sitting—to be more or less deep according to severity of case. Inhalations to be repeated 5 or 7 times a day. If much mucus, expectoration to be assisted by usual remedies. In children iodine tincture may be dropped on pieces of cotton to be laid on pillow (over oilcloth) while patient sleeping. *Torri.* 303

**Bronchopneumonia.** TREATMENT. Hot baths, followed by brief cold affusion, in acute bronchitis, bronchiolitis, and bronchopneumonia in young children reduce fever, stimulate expectoration, deepen breathing, exert soporific effect, improve appetite, stimulate elimination through skin, and seem to act specifically in shortening disease. Bath water is at 41° C. (105.8° F.), hot water being added as cooling occurs. Patient is bathed every three hours, up to 5 times a day. Baths particularly appropriate for feeble children who became chilled at periphery with internal temperature high. The weaker the child and higher the fever, the more frequently baths are given. Where the temperature not above 39° C. (102.2° F.), ten-minute bath is given 3 times a day. Hot bath is not contraindicated where temperature exceeds 40° C. (104° F.) in infants or very young children, though for older children warm baths may be substituted. At conclusion of each bath nurse elevates child from hot water so back of neck is exposed, and cold water is dashed once over neck, causing reflex gasp for breath. Child is next reimmersed momentarily in hot water and cold water poured on chest, after which he is dried, wrapped in warmed clothes, and placed in warmed bed. Baths to be continued once daily into convalescence if patient coughs. *Arneth.* 55

**Burns.** TREATMENT. (1) Hypodermic injection of morphine and atropine. (2) Immerse burned area in, or cover with light cloth moistened with, cold water to which has been added 1 teaspoonful of sodium bicarbonate or chloride per quart; continue until morphine effect manifest. (3) Spray or mop burn and surrounding surface with hydrogen dioxide, mop with dry gauze, apply gauze strips dipped in 2 per cent. picric acid solution in dilute alcohol, and cover with thin layer of cotton and adhesive strips or bandage. Allow dressing to remain till soiled, then reapply. (4) About third day, open blisters and mop away contents. (5) Where sloughing: Remove dead tissue as it loosens, cleanse surface with dioxide, dry, mop with picric solution, put on strips of rubber tissue previously kept in 1:1000 mercury bichloride

solution, and cover with picric acid compress and cotton. *Plain.* Page 299

**Cancer.** DIAGNOSIS. Marked diminution of the area of cardiac dullness in the recumbent posture, as determined by percussion, found in 87 per cent. of 111 cancerous cases and only 16 per cent. of 107 non-cancerous cases. This sign may be present in cancerous cases that show no wasting. When the sign is present, diagnosis of carcinoma should be rejected only after careful consideration. In some cases the sign has appeared early enough to enable successful resection to be carried out. *Gordon.* 234

**Cancer, Gastric.** DIAGNOSIS. Positive or negative diagnosis made by serial röntgenography in 616 cases. Of 97 cases operated on, diagnosis found absolutely correct in 94. Gastric cancer at any stage, or indurated gastric ulcer, can be detected by this method as accurately as renal calculi or bone fractures. *Cole.* 301

**Cellulitis.** TREATMENT. Packing infected arm from fingers to shoulders in hot mixture of saturated magnesium sulphate solution and glycerin in equal parts found to control infection promptly. *Freese.* 304

**Constipation.** TREATMENT. Constipation and rectal irritation in neurasthenics greatly benefited by the perineal and anal douche, hot as can be borne, followed by cold douche at 60° to 50° F.; stronger revulsive effects are obtainable with an alternate hot and cold application. *Pope.* 50

**Corneal Ulcer.** TREATMENT. Bathing part with 1 per cent. ethyl hydrocupreine solution for one-half minute every hour, six hours first day and twelve on next, found rapidly effectual in a case of ulcus serpens with hypopyon from chronic dacryocystitis. Sac expressed and conjunctiva cleansed with boric acid before each treatment with ethyl hydrocupreine, which was dropped on the ulcer. Practically specific against pneumococcic infections. *Wicner.* 168

**Delirium Tremens.** TREATMENT. (1) Withdraw cerebrospinal fluid by lumbar puncture in amounts as large as possible—50 to 60 c.c. (2) Inject with syringe an equal amount of sterile 1 per cent. sodium bromide solution. Immediate improvement in delirium usually occurs, followed by temporary return and then permanent disappearance of delirium. Relapse occasionally after a few days; usually controlled by repetition of injection. *Kramer.* 110

**Diabetes Insipidus.** TREATMENT. Case in which injections of pituitrin caused marked, though but temporary, improvement. *Farini.* 277

**Diabetes Mellitus.** DIAGNOSIS. Frommer's test recommended for detection of small amounts of acetone. Treat about 10 c.c. of urine with 1 Gm. of sodium hydroxide in substance and without waiting for it to dissolve; add 10 or 12 drops of a 10 per cent. solution of salicylaldehyde in absolute alcohol. Heat to 70° C. In the presence of acetone, marked purple-red color develops at zone of contact with alkali. This test indicates presence of 0.000001 Gm. of acetone. Urine must be diluted so that its specific gravity is about 1.01. *Muhlberg.* 232

TREATMENT. Therapeutic value of an "easy nitrogenous diet" pointed out, *i.e.*, of one consisting almost exclusively of milk and its derivatives, cereals, fruits, and vegetables. Such a diet partially takes off burden of nitrogenous metabolism from liver and tends to relieve its instability as regards glycogenic function, therefore often causing glycosuria to disappear. *Cornwall.* 110

Dry vegetable diet recommended for cases in a state of acidosis. Patient to take daily 10 ounces (300 Gm.) of dried legumins (peas, beans, lentils), 5 ounces (150 Gm.) of butter, 3 to 6 eggs, and 3 to 6 aleuronat or gluten rolls. Green legumins may also be given. Soy beans may be used. This diet to be followed at least 3 days at a time. The starch it contains is better utilized than that of other foods, glycosuria often being not higher than under a diet poor in carbohydrates. The diet also combats nitrogenous loss; somnolence and anorexia, where present, often disappear, and diaceturia diminishes. *Labbé.* 300

**Dysentery, Bacillary.** TREATMENT. In acute form: (1) Rest and warm covering; (2) only small amounts of food at a time; (3) calomel at the outset; (4) acid drinks; (5) enemata of saline or soda solution or of methylene blue. In chronic form: (1) Rest; (2) enemata of 1:500 or 1:1000 silver nitrate, 0.25 to 0.5 per cent. tannic acid, 1:500 or 1:1000 thymol, 1 to 2 per cent. resorcinol or creolin, or enemata of gum arabic mixed with bismuth subgallate or iodoform; (3) phenyl salicylate, tannigen, ichthyol, or calomel internally; (4) serum treatment, 10 c.c. in mild cases, 10 c.c. twice at six- to ten- hour interval in medium cases, and 40 to 60 c.c. in severe cases, not exceeding 20 c.c. at a time when serum used daily; (5) appendicostomy or cecostomy with irrigation in severe cases. *Bassler.* 111

**Dysmenorrhea.** TREATMENT. Cocaine applied to tuberculum septi in nose and anterior portion of inferior turbinate on both sides, followed by application of trichloracetic acid over these spots, in 93 cases. Four applications made between periods. Cases with premenstrual headache, nausea, and colic at onset of flow—but without organic pelvic lesions—completely relieved. Of 81 cases sending subsequent reports, 48 had been cured and 14 improved. *Mayer.* 167

Atropine found very useful, except in cases with high blood-pressure, when pressure must be reduced and cause sought and removed. *Stolper.* 235

**Eclampsia, Puerperal.** TREATMENT. Report of 2 cases in which pituitary extract injections—2 in each patient—yielded successful results, labor being brought on thereby. *Schlossberger.* Page 28

**Eczema.** TREATMENT. Both chronic and acute forms respond to thyroid treatment. Fat subjects and those with xerodermia respond best. *Morris.* 11

In mild acute cases paint on lesions an aqueous solution of picric acid several times daily; in more severe cases apply wet dressings of the acid, held by facial mask. Prompt and gratifying results. In subacute and chronic types cure hastened by beginning treatment with two or three days' application of picric acid solution. *Wilcox.* 176

**Edema, Angioneurotic.** TREATMENT. Pituitary and adrenal preparations found useful. *Morris.* 11

**Epilepsy.** TREATMENT. Four patients with severe essential epilepsy treated with subcutaneous injections of cerebrospinal fluid, taken for each from another epileptic. Considerable benefit. Dose of fluid injected, 3 to 5 c.c. biweekly or weekly. Improvement striking both as to severity and frequency of attacks. In some, petit mal took place of grand mal. Greatest improvement noticed especially if injected fluid was taken from other patients during recurrent attacks, no matter how slight the latter. *Gordon.* 235

**Epistaxis.** TREATMENT. Subcutaneous injection of 8 minims (0.5 c.c.) of pituitrin brought early relief in 5 cases. *Citelli.* 279

**Epithelioma.** TREATMENT. Concentrated sunlight, focused on growth with ordinary magnifying glass, found effectual. Useful where X-rays and radium not available. Invariably successful in obstinate recurrent ulcerative patches on face or nose. Focus sunlight on sore for ten or fifteen minutes at a sitting. If scab present, concentrate rays till burning is felt, then lengthen focus to cover wider area. Induce burning again every few minutes. Treat every day or two till scab easily removed, then apply a little cocaine and after three or four minutes apply rays so as almost to cauterize base of ulcer. Alternate with milder applications for fifteen minutes. Under milder treatments thereafter, at longer intervals, cure usually complete in three to six weeks. *Seelye.* 166

**Erysipelas.** TREATMENT. In severe erysipelas a single small vaccine inoculation,—5 million,—preferably of autogenous vaccine, will usually cause a critical fall of temperature, and a second or third dose at about five days' intervals generally completes resolution. *Whitfield.* 56

In facial erysipelas: Have beside bed bowl of boric acid solution in which ice is placed. Keeping cloths frequently moistened with the solution continuously on face effectually relieves pain and burning. Where leg or arm involved: Wet dressings of boric acid or aluminum acetate. In migratory cases: Ichthyol may be applied or surfaces painted with picric acid solution. *Erdman.* 112

Pyramidon used in 20 cases with uniformly favorable results: Diaphoresis, antipyresis, sedation, fading of eruption, which ceases to spread, and improved general condition. Diuretic beverages also given. Locally, following ointment used: Phenolis, camphoræ pulveris, ana gr. xv (1 Gm.); adipis lanæ hydrosi, petrolati, ana ℥ss (15 Gm.). *Satre.* 167

Discomfort and pain more rapidly relieved by picric acid solution than other agents, and edema disappears promptly. *Wilcox.* 176

**Felon.** TREATMENT. Mixture of saturated magnesium sulphate solution and glycerin in equal parts found to control infection in an unusually short time. *Freese.* 304

**Fracture, Ununited.** TREATMENT. Osmic acid, 0.02 Gm. in 1 per cent. solution, injected directly into focus in a case of ununited fracture of fibia and fibula, rebellious for six months. Injection repeated 3 times in two weeks. Patient discharged two weeks later. Stimulating action of the acid on periosteum and marrow confirmed in rabbit experiments. *Segrè.* 307

**Furunculosis.** TREATMENT. Where boil already soft: (1) Paint tincture of iodine freely over and around it; if several lesions close together, paint over entire area. (2) Place gauze pad with 10 per cent. ichthyol in petrolatum over the area, cover with a little cotton, and hold with bandage. (3) Next day, remove pus, wipe with benzine, and reapply iodine and ichthyol. (4) When pus entirely absorbed, discontinue iodine, but apply pure ichthyol. (5) To activate epithelial growth where necessary: Argenti nitratis, gr. xv (1 Gm.); balsami peruviani, gr. lxxv (5 Gm.); adipis lanæ hydrosi, ℥iiiss (100 Gm.).—For a furuncle not yet softened: (1) Apply iodine. (2) Thick coating of ichthyol, to be allowed to dry on or covered with a little absorbent cotton and gummed adhesive. (3) Next day, wipe off ichthyol with warm water or if possible wash area with soap and water, and reapply iodine and pure ichthyol. (4) Stop iodine on third or fourth day, continuing ichthyol till all inflammation subsided. Single layer of gauze, tissue, or cigarette paper may be applied when ichthyol has dried. *Berger.* 113

**Gastric Atony, Acute.** TREATMENT. Continuous lavage of stomach through nose recommended. Cocainize nose and work soft oiled tube with 8 to 11 mm. lumen down into stomach. Attach longer tube and carry to receptacle. Amounts up to 5 liters thus drain away. Keep outlet of tube at level of bed to prevent aspiration of mucous membrane. *Grosser.* 305

**General Paralysis.** TREATMENT. Remissions may be prolonged by suitable doses of tuberculin (1/1000 to 1/5000 mg. of tuberculin residue). *Jackson.* Page 236

**Goiter.** TREATMENT. Vaccines prepared from coliform bacilli of patient's own bowel administered in 8 cases of parenchymatous goiter, with disappearance of enlargement in one and diminution in the others. Initial dose usually 125 million, later increased, upon diminution of size of goiter, by 25 or 30 million weekly. Injections given weekly. *Langmead.* 23

Salicylates, creosote carbonate, menthol, thymol, etc., are helpful after the intestinal functions have been regulated. In nodular, cystic, colloid, fibrous, and intrathoracic goiters, iodine is seldom of value and sometimes dangerous. *Sajous.* 1

**Goiter, Exophthalmic.** TREATMENT. Ligation of thyroid vessels and sometimes a portion of the gland is indicated (1) in patients with mild symptoms of hyperthyroidism; (2) in the large group having acute, severe exophthalmic goiters, and the chronic, very sick patients who, having exhausted all forms of treatment, are suffering from various secondary symptoms, and (3) in cases with marked pulsation and thrill of thyroid arteries associated with cardiac dilatation and loss of weight. Thyroidectomy later advisable, to prevent relapse to former condition. Should trouble recur before a partial thyroidectomy is made, or a severe relapse after partial extirpation, inferior thyroid artery should be ligated and half of remaining lobe removed when improvement occurs. *Mayo.* 16

In early and mild cases in virgins, author begins treatment with corpus luteum, which is useful as antidote to thyroid intoxication. *Berkeley.* 20

Report of cases improved by administration, for several months, of 20 to 30 Gm. (5 to 8 drams) of quinine divided among twenty days in each month. *Gaultier.* 90

**Gonorrhea.** TREATMENT. Iodine treatment gave excellent results in gonorrhea in the female: (1) Swab external genitals with a 3.5 per cent. solution of iodine in alcohol; (2) force a few drops of same solution in orifices of Skene's and vulvovaginal glands through blunt hypodermic needle; (3) with patient in Sims's position, insert Sims's speculum, swab vagina dry with cotton, and paint cervix with iodine solution; (4) swab posterior vaginal *cul-de-sac* and wall; (5) introduce narrow strip of gauze high up against posterior wall, and remove speculum; (6) give hexamethylenamine, 5 to 7½ grains (0.3 to 0.5 Gm.) four times daily in plenty of water. Where cervix and uterus chronically involved: (1) Paint cervix with iodine; (2) grasp anterior lip with volsellum and remove any stringy discharge; (3) insert small uterine sound if required; (4) introduce intrauterine syringe to fundus and instill 1 dram (4 c.c.) of iodine solution while withdrawing; (5) treat vagina as in acute cases. Repeat applications every third day in both acute and chronic forms. In all cases order hot douches of 4 to 6 quarts (liters) of hot saline two to four times daily, always followed by a 1-quart (liter) injection of 1:5000 permanganate or 1:250 picric acid. *Hofmann.* 48

**Gonorrheal Vaginitis of Children.** TREATMENT. Mixed autogenous vaccines of gonococcus and usually staphylococcus, streptococcus, diplococcus, colon bacillus, etc., used in 40 cases with uniformly good results. Average number of injections required for cure, 7. Initial dose, 25 to 50 million, then gradually increased. Interval between injections not less than five nor more than seven days. If after six weeks case still needs treatment, as shown by examination of discharges, a second vaccine should be made. *Wolff.* 49

**Headache.** TREATMENT. In headache or head pressure in nervous fatigue a fomentation applied for five or ten minutes twice, and followed by a cold compress, is effective. If headache is congestive, use hot foot bath, followed by ice-bag to nape of neck and cold compress to forehead. Sitz baths at 90° F., or cold foot baths, often relieve. *Pope.* 50

**Hemoptysis.** TREATMENT. Subcutaneous injection of 8 minims (0.5 c.c.) of pituitrin nearly always brings relief in average cases. Where first injection fails, give a second, and later if necessary a third, the latter intramuscularly. *Citelli.* 279

**Hemorrhage, Cerebral.** TREATMENT. Venesection used with good results and recommended in cases of apoplexy in full-blooded patients with blood-pressure of 200 mm. or more. Amount of blood let in author's cases, 12 to 48 ounces. Where vein at elbow not easily found in stout persons, there are usually varicose veins in legs which can be opened. *MacFarlane.* 121

**Hernia.** TREATMENT. Inversion of hernia recommended in patients who take anesthetic poorly and maintain strong expiratory efforts, forcing viscera into sac under pressure. Primary union and cure of hernia in each of author's 7 cases thus dealt with. *Haynes.* 170

**Herpes Labialis.** TREATMENT. Picric acid solution causes rapid drying of lesion and tends to prevent extension. *Wilcox.* 176

**Hodgkin's Disease.** TREATMENT. Benzene, 5 minims (0.3 c.c.) three times daily at first, then increased to 10 minims (0.6 c.c.), caused marked regression of enlarged nodes, beginning two weeks after treatment begun, in a case previously treated unsuccessfully with X-rays. The 10-minim dose was continued for six weeks. *Lawson and Thomas.* 173

**Hyperchlorhydria.** TREATMENT. Cream diet considered useful. (See Ulcer, Gastric.) *Nichols.* Page 169

Following measures recommended: (1) Magnesium oxide, combined with sodium sulphate and belladonna in small amount. (2) All food to be well cooked and most carefully minced. (3) Patient to take 2 or 3 meals at two-hour intervals in forenoon, but nothing after lunch until 7 P.M., when only porridge to be taken. (4) Fluid intake to be generally diminished and restricted to hours when stomach not filled with food. (5) In severe cases, or where gastroptosis: Rest in bed for two or three weeks. (6) Hot compresses twice daily for two hours; cold compresses at night. (7) If hyperacidity arises on basis of a catarrh: Rinse empty stomach in morning with 1:1000 salicylic acid or 1:500 silver nitrate solution. (8) Bowels to be carefully regulated. *Schmidt.* 302

**Hyperthyroidism.** TREATMENT. Injection into enlarged thyroid of 1 to 4 per cent. solutions of quinine and urea hydrochloride caused marked improvement in 3 cases. *Watson.* 265

**Ileus.** TREATMENT. Continuous lavage of stomach through nose recommended in duodenojejunal occlusion, postoperative bowel paralysis, ileus from adhesions, spasmodic contraction from peritonitic reflexes, and vicious circle after gastroenterostomy. (See Gastric Atony, Acute.) *Grosser.* 305

**Impetigo.** TREATMENT. In exceptional cases which do not yield to local measures, a few staphylococcic vaccine inoculations—usually, in fact, a single one—will cause prompt cure. *Whitfield.* 56

**Infections, Local.** TREATMENT. Following summary of serviceable measures present: *A.* Inflammations with slight serum exudation, but with redness, heat, swelling, pain, and loss of function: 1. Rest. 2. Elevation. 3. Hot, wet dressing.—*B.* Where much serum exudation, but slight tendency to necrosis: 1. Incision. 2. Place gauze in wound saturated with Chlumsky's solution. (Camphor, 60 parts; phenol, 30; alcohol, 10.) 3. Wet dressing; keep wet. 4. Remove gauze in twenty-four hours. 5. Insert rubber drain. 6. Apply wet dressing.—*C.* Where marked necrosis: 1. Incision. 2. Drainage. 3. Wet dressing. 4. After inflammation receded, Durante's solution. (Iodine, 1 part; potassium iodide, 10; guaiacol, 5; glycerin, to make 100.) 5. Dry dressing. *Hoag.* 307

**Insanity.** TREATMENT. Recovery in manic-depressive insanity may be hastened by stimulation of leucocytosis by injection of 1 c.c. of terebene subcutaneously in the flank. *Jackson.* 236

**Insomnia.** TREATMENT. In nervous fatigue (neurasthenia) this symptom is best met by cold pack or dripping-sheet at bedtime, or by the trunk compress, consisting of a coarse linen bandage wrung out of water at 65° F. and covered by several layers of same material to exclude air; it should be worn all night. Excellent also is the neutral bath at 94° to 96° F. for from twenty to sixty minutes. *Pope.* 50

**Intertrigo.** TREATMENT. Paint picric acid solution on surfaces and separate them with thin layers of absorbent cotton. In the more severely infected cases wet dressings of picric acid. Prompt results. *Wilcox.* 176

**Intestinal Motor Inactivity.** TREATMENT. Pituitary extract recommended. Injection of 3 c.c. in adults causes evacuation in 88 per cent. of cases in from six to twenty minutes. Usually constipation later recurs, but often a single injection will induce several stools on same day and keep bowels regular for a day or two after. The extract is valuable for prophylaxis and cure of postoperative intestinal paresis. Continued, it tones up intestine and also stimulates stomach motility. For lasting effect, inject ½ c.c. intramuscularly every day for a week, then 1 c.c. every three days for another week, and thereafter 1½ c.c. once weekly. *Houssay and Beruti.* 27

**Intestinal Stasis, Postoperative.** PROPHYLAXIS. Harmful effects of abrasion of visceral peritoneum in operations can be overcome by introducing 6 ounces (180 c.c.) of sterilized mineral oil in abdomen and sponging it over coils of intestine. *Burrows.* 52

**Lumbago.** TREATMENT. Salicyl compounds or a 10- or 20- grain (0.6 or 1.2 Gm.) dose of quinine at onset of condition useful. Rochelle salts, ½ to 1 dram (2 to 4 Gm.) every hour or two until urine alkaline and bowels freely moved, also valuable. "Walking the lumbago off" may succeed if free perspiration accompanies the exercise. Turkish bath in early stage safer and more effective. Later: Rest, dry cups locally, deep massage, faradic current, and, if salicylates fail, iodine, in vegetable protein combination. *Henry.* 175

**Lupus Erythematosus.** TREATMENT. Benefit followed use of adrenal substance in this condition. *Morris.* 11

**Lupus Vulgaris.** TREATMENT. Where Finsen light not available, old tuberculin is capable of great service. Begin cautiously; then make steep rise in dose as soon as one dose ceases to call forth reaction. *Whitfield.* 56

Gold and potassium cyanide injected intravenously in 12 cases. Single dose, 0.01 to 0.05 Gm. Results good. Course of 12 to 14 injections followed by interval of two to three weeks, after which another treatment given. Even in severe cases, therapeutic results better than with tuberculin and other measures. *Poór.* 236

**Mammary Abscess.** PROPHYLAXIS. Threatened mammary abscess underwent ab-

sorption in 2 or 3 cases soon after administration of pituitary extract. *White.* Page 283

**Myasthenia Gravis.** TREATMENT. Pituitary extract, combined with ovarian, found useful in 2 cases. *Lagane.* 85

**Obesity.** TREATMENT. Colloidal hydroxide of palladium, suspended in olive oil and liquid paraffin in proportion of 25 mg. of palladium to 1 c.c., caused marked loss of weight, without untoward action except some local irritation, in 2 cases of obesity. Dose, 2 c.c. of suspension, injected under skin of abdomen. *Kauffmann.* 116

**Osteomalacia.** TREATMENT. Case in which excellent results obtained from epinephrin, injected in doses of 8 minims (0.5 c.c.) of 1:1000 solution, daily, in 2 series of 9 injections each. Patient finally discharged cured. *V. Salis.* 278

**Ozena.** TREATMENT. Use of sugar recommended. For first week or two surgeon should carry out treatment himself, and precede sugar by removal of crusts from nose, softening them if necessary with hydrogen dioxide or sodium bicarbonate solution. Patient to use nasal syringe once daily. After crust removal, massage mucosa with cotton-tipped probe; then nostrils may be packed with ribbon gauze soaked in simple syrup, to be removed in twelve hours. Repeat this treatment on alternate days. After a fortnight patient can insufflate powdered sugar himself. *Harry.* 175

**Paralysis Agitans.** TREATMENT. Good results from administration of thyroid and parathyroid preparations with calcium chloride. *Gauthier.* 86

**Perinephric Abscess.** DIAGNOSIS. Pain referred to lower limb of same side found of considerable diagnostic value. There are both pain and tenderness, particularly marked along external cutaneous nerve just below anterior superior spine and on external aspect of thigh. *Belikov-Chtomitch.* 117

**Placenta Previa.** TREATMENT. In marginal variety, inject 30 minims (2 c.c.) of pituglandol and at once rupture membranes. In central variety, according to extent of dilatation, perform version or introduce metreurynter and give pituglandol. Metreurynter generally expelled spontaneously in one-half hour. Then perform version and give second dose of pituglandol. *Gall.* 280

**Pneumonia.** TREATMENT. Ethyl hydrocupreine hydrochloride given internally in pneumococcic lung inflammation, with good results. Dose usually 0.5 Gm. (7½ grains) *t. i. d.*, daily amount not exceeding 1.5 Gm. (23 grains). In 9 cases no other medication was employed; in all of these temperature fell more rapidly, by crisis or lysis, than with other methods. No untoward after-effects. *Vetlesen.* 118

Vaccine treatment advised. First give polyvalent stock vaccine of pneumococcus and streptococcus, of each, 30 million, as soon as possible. Make sputum smears and cultures, blood-cultures in early cases, lung puncture in late ones, and prepare autogenous vaccine. If no definite response in twenty-four to forty-eight hours, repeat or preferably give autogenous vaccine. If still no response in thirty-six or forty-eight hours, double the dose. If there is response, as shown by improved clinical symptoms and signs, increased well-being, etc., defer reinoculation three days, or until the first symptoms of retrogression in general condition or physical signs occur. Maintain the dosage or increase it every two or three days until the patient entirely well. Generally about three doses are necessary. Average mortality with vaccine treatment only 5 to 10 per cent. Convalescence shortened and danger of complications lessened. In severe cases also give 20 to 30 grains of sodium citrate every two or three hours. *Craig.* 238

Epinephrin, 8 minims (0.5 c.c.) of 1:1000 solution in 1 pint (500 c.c.) of saline solution subcutaneously, caused prompt improvement in a desperate case. *Lonhard.* 281

**Poliomyelitis, Acute.** DIAGNOSIS. Preparalytic symptom: A peculiar, twitching, tremulous, or convulsive movement of certain groups of muscles, lasting from a few seconds to somewhat less than a minute. Usually affects part or whole of one or more limbs, face, or jaw, but sometimes whole body. Duration of spells short at first. Often accompanied by a cry similar to hydrocephalic, or by brief period of unconsciousness. *Colliver.* 177

**Psoriasis.** TREATMENT. Thyroid preparations found especially efficacious in psoriasis associated with adiposity. They should not be exhibited until eruption is fully developed. *Morris.* 41

Low nitrogen diet found to have very favorable influence upon psoriasis eruption, especially when extensive. Severe cases improve under such a diet almost to the point of disappearance of the eruption. *Schamberg, Kolmer, Ringer, and Raiziss.* 178

Application of picric acid solution brings immediate and constant relief from itching. *Wilcox.* 176

**Puerperal Fever.** PROPHYLAXIS. Whenever irrigation of vagina with boiled water through speculum yields a yellowish fluid, one should irrigate once daily for at least ten days with a 1:200 solution of lactic acid. Morbidity thereby reduced from 28.6 to 7.6 per cent. Full baths to be avoided before delivery. *Zweifel.* 54

TREATMENT. Intravenous injections of distilled water given in 142 cases of puerperal fever. Of 62 patients with pyemia and septicemia, 42 were cured. In an hour or hour and a half after an injection there is usually a chill, with rise in temperature. By evening or the following morning temperature will

have fallen to normal, sweating usually accompanying the drop. *Ilkewitsch.* Page 53

**Puerperal Sepsis.** TREATMENT. Fixation abscess recommended in this and other severe infectious states, including pneumonia, appendicitis, typhoid fever, etc., whenever condition seems to be taking a turn for the worse. Inject 2 c.c. of pure oil of turpentine under gluteal skin. When abscess forms, evacuate through small incision (do not drain) and apply Bier cups twice daily. Excellent results in 18 cases. *De Lostalot.* 168

**Pyorrhea Alveolaris.** TREATMENT. Sensitized vaccine against streptococcus, staphylococcus, pneumococcus, and bacillus of Friedländer used in a number of cases. After 2 injections, mechanical and dental treatment added. After 4 or 5 injections, teeth clean and firm, and organisms gone. Three or four supplementary injections given. No recurrence in six months. *Bertrand and Valadier.* 304

**Rabies.** TREATMENT. Potassium iodide in 2 per cent. solution, 1 tablespoonful or dessertspoonful at frequent intervals throughout course of preventive injections, recommended as adjuvant in treatment. In 3 cases of abortive rabies symptoms promptly disappeared after use of potassium iodide. Advocated especially in cases where infection has existed in latent condition for some time. *Koch.* 55

**Rachitis.** TREATMENT. Pituitary extract given to 16 young children with rickets, and effects compared with controls. After a few weeks of pituitary, the children were able to stand and began to walk; fontanelles began to close and growth of teeth was considerably accelerated. Osseous tenderness gradually diminished, weight was gained, and musculature became firmer. *Weiss.* 218

**Retention of Urine, Postoperative.** TREATMENT. Pituitary extract injected intramuscularly in 21 puerperal and 24 postoperative cases with excellent results. *Ebeler.* 91

**Ringworm.** TREATMENT. Body ringworm more easily controlled by painting on picric acid solution than by usual antiseptic ointment. *Wilcox.* 176

**Sciatica.** TREATMENT. Eight cases treated by injections of 4 per cent. quinine and urea hydrochloride in salt solution into subcutaneous tissue over course of nerve. Fifty injections in all, without untoward results. Always decided relief after first injection and no further attack after third. Injections daily for 4 doses, then every other day until patient entirely relieved. Two cases of facial neuralgia also treated, with complete relief after second injection. *Cables.* 119

**Syphilis.** DIAGNOSIS. Luetin test valuable as diagnostic measure in tertiary and latent stages of syphilis, indicating a state of hypersensitiveness to spirochetal proteins induced by a period of cessation of introduction of these proteins previous to the test. Provocative injection of salvarsan, followed by both Wassermann and luetin tests, suggested to ascertain whether treatment has been curative in a given case. *Foster.* 179

TREATMENT. Epinephrin, 15 to 20 drops of 1:1000 solution in a little water by mouth, advised ten to fifteen minutes before injection of neosalvarsan, to prevent "nitritoid" symptoms, arising in some patients from the latter, *e.g.,* facial congestion, tingling in throat, nausea, and vomiting. *Galliot.* 212

**Tonsillitis, Ulcerative.** TREATMENT. After thoroughly washing surfaces and crypts, apply 10 per cent. silver nitrate solution over ulcerated surface and carry down into crypts as well. Then dust thymol iodide with powder blower over gland and throw it into diseased lacunæ. Where tonsils seat of recurring inflammation, but patient objects to removal, use electric cautery. Selecting 3 or 4 crypts at a time, apply 10 per cent. cocaine solution to interior of each with fine-pointed cotton applicator. When anesthesia sufficient, introduce curved electrode into each crypt and turn on sufficient current to produce a white heat before electrode removed. Patients thus treated are freed from further attacks. *Bishop.* 241

**Tracheobronchial Glandular Enlargement.** DIAGNOSIS. Percussion of thoracic vertebræ, especially those above level of inferior scapular angles, affords tonal changes of clinical value in this condition; these must always be correlated, however, with mural signs in the individual case. In comparison with other (neoplastic) mediastinal masses, tracheobronchial tumors affect vertebral percussion sound less, and oftener produce dullness than hyperresonance. *Da Costa, Jr.* 180

**Tuberculosis, Articular.** TREATMENT. X-rays found useful in bone and joint tuberculosis. Aluminum or thick leather shield to be used. Treatment not to be employed in children less than 5 years old, and in older children epiphyses should preferably be avoided. Best effects noted in cases with sinuses and secondary infection. Part exposed from all sides to an erythema-producing dose; three weeks then allowed to elapse before repetition. Joints healing under the rays show but little limitation of motion. Abscesses with skin about to yield should not be rayed, owing to danger of necrosis. *V. Schede.* 165

**Tuberculosis, Laryngeal.** TREATMENT. Scarlet red, 10 per cent. in a mixture of equal parts of sesame oil and petrolatum, applied twice daily in cases with laryngeal lesions, whether ulcerative or not. No unpleasant results. Prompt relief of pain in

every case, tendency of ulcerations to heal, hoarseness improved, and, where only infiltrations and edema, swelling markedly less after a few weeks. *Hinman.* Page 306

**Tuberculosis, Pulmonary.** DIAGNOSIS. Contrast between resonance of air-containing tissue and deadness of the airless spot is striking when light percussion practised. If on increasing force of stroke dullness remains, one may conclude that there is an extensive area of airless tissue. A shorter apex on one side is of immense significance. In infiltrated apex a long, held inspiration gives a duller note on percussion than is found over healthy side; this is often of value in doubtful cases. Where history, symptomatology, and course of disease point to tuberculous infection, one may safely diagnosticate tuberculosis without any definite auscultatory signs. *Fishberg.* 54

TREATMENT. Frequency of gastric atony and dilatation, with resulting digestive symptoms and secondary toxic manifestations (aches and pains in chest and right hypochondrium, morning depression, insomnia, hepatic weight, vertigo, chilliness an hour after meals, fleeting edema, etc.), in pulmonary tuberculosis pointed out. Treatment: (1) Support to stomach and abdomen by Rose belt of plaster or moleskin, followed, upon improvement, by supporting belt to be worn continuously and later in daytime only. (2) No liquids with meals or for two to two and one-half hours after. (3) Lunch to be light. (4) Recumbency, with attempt to sleep for one-half to one hour after each meal. (5) No alcohol or fresh bread. (6) Medicinal treatment: Tr. nucis vomicæ, acidi hydrochlorici dil., āā f℥ss (15 c.c.); glyceriti pepsini, f℥iss (45 c.c.); aq. menthæ pip., q. s. ad f℥iij (90 c.c.). Teaspoonful in ½ glassful of water after meals. If much flatulence, add chloroform water, 2 or 3 minims (0.13 or 0.2 c.c.) to the dose, until relieved. (7) Cold shower or sponge baths, with needle bath to abdomen, followed by brisk rub, each morning. (8) Where mucous passages and flatus: Turkish towels, wrung out in hot water, to be applied to abdomen for one-half hour after meals. (9) Thorough mastication of food and abstention from worrying at meals. (10) Fats to be avoided at first. *F. N. Robinson.* 95

Measures to overcome fever described: (1) Where prolonged fever drains on patient's strength, pyramidon is drug to be preferred—5 grains (0.3 Gm.) in cachet at night, or, if necessary, three times a day. In neurotics bromides sometimes efficacious. (2) Rest in recumbency to be insisted on until temperature does not rise above 99° in men or 99.2° in women, when patient may sit in chair for two hours, then recline on couch, in open air if possible. Exercise then gradually increased. (3) Where severe cough, sedative mixture tends to prevent fever from the exertion and autoinoculation. (4) Where rest and drugs fail, cautious use of tuberculin (T. R. or B. E.), beginning with only $\frac{1}{100000}$ mg., exerts antipyretic action, though often only for short periods. Tuberculin acts best in cases free from fever while at rest, but febrile when exercise taken. *Wethered.* 120

Value of auscultation at acromion process in apical tuberculosis emphasized; it amplifies all auscultatory signs over apices. Of 28 cases in first stage, all showed acromial breathing. *Magida.* 239

**Ulcer, Gastric** DIAGNOSIS. Following combinations practically assure a diagnosis of ulcer: (1) Tender point with occult blood. (2) Hypersecretion with tender point. (3) Hypersecretion with occult blood. (4) Tender point with repeated positive thread tests. (5) Tender point with hematemesis. (6) Hematemesis with hypersecretion. (7) Hypersecretion with positive thread tests. *Verbrycke.* 114

TREATMENT. Cream diet used with success in 26 cases. One quart (4 glasses) a day yields 1800 calories. To this may be added 600 c.c. of milk or 6 slices of bread or 5 tablespoonfuls of oatmeal gruel or 3 eggs. Cream causes inhibition of gastric secretion. If not tolerated in full strength, it may be diluted with equal or greater amount of milk. Ice-cream a useful variant. Some marked cases progressed to good recovery in two or three months under cream diet. Method adapted for bed or ambulant treatment. Also useful as prophylactic against recurrence of ulcer. *Nichols.* 169

**Ulcers.** TREATMENT. In indolent tuberculous ulcers, 1 or 2 doses of old tuberculin usually cause complete healing in a week or two. *Whitfield.* 56

**Urticaria.** TREATMENT. Pituitary and adrenal preparations found useful. *Morris.* 11

**Vomiting.** TREATMENT. In paroxysmal vomiting of chronic, recurrent character, where no organic disease of stomach is discoverable, adrenal gland treatment is frequently of value. *Berkeley.* 20

**Vomiting of Pregnancy.** TREATMENT. Apomorphine, $\frac{1}{36}$ grain (0.0018 Gm.) in a teaspoonful of water, found effectual in a severe case; likewise in other cases of vomiting or nausea. *Field.* 182

Thyroidin in 1½-grain (0.1 Gm.) tabloids given in several cases, with complete curative effect. *Koreck.* 284

**Vomiting, Postanesthetic.** TREATMENT. When vomitus of hemorrhagic type, give 5 to 10 minims (0.3 to 0.6 c.c.) of 1:1000 epinephrin hydrochloride in a teaspoonful of water. Cessation of vomiting follows. *Keay.* 93

**Whooping-cough.** TREATMENT. Vaccine containing 20,000,000 dead *B. pertussis* per c.c. used in about 70 cases. Infants received ⅓ c.c. as initial dose and ⅔ c.c. four days later; others, ½ c.c. and 1 c.c. Prompt, uniformly good and often striking results obtained. In cases already having a broncho-

pneumonia as complication, a mixed vaccine should be used. *Davidson.* Page 118

Silver nitrate in 2 per cent. solution applied to throat in 95 early cases to prevent spread of infection downward from pharynx. Useful results in 84 instances. Mucus secretion prevented and coughing spells due to irritation by secretion minimized. Silver solution applied every day at first; later, and in older children throughout, on alternate days. *Ochsenius.* 182

Epinephrin, 3 minims (0.2 c.c.) of 1:1000 solution, given every four hours in case in a child 7 years old, ill six weeks. Paroxysms markedly reduced almost at once. Drug then continued 3 times a day for three weeks more. *Lord.* 280

**Wounds.** Treatment. Stream of air from ordinary electric fan or register found useful in drying and promoting healing in large wounds, obstinate leg ulcers, and discharging eczema. *Heisler.* 182

Mixture of saturated magnesium sulphate solution and glycerin in equal parts recommended for dressing infected wounds. *Freese.* 304

Following summary presented: *A. Incised wounds:* 1. Paint with iodine. 2. Shave dry. 3. Tie all bleeding points. 4. Remove foreign substances. 5. Suture all tendons and nerves. 6. Again apply iodine in and around wound. 7. Suture wound. 8. Apply dry sterile dressing.—*B. Lacerated wounds:* 1, 2, 3, 4, 5, same as in *A.* 6. Cut away all damaged tissue. 7. Again apply iodine. 8. Suture wound.—*C. Punctured wounds:* 1, 2, same as in *A.* 3. Enlarge opening for drainage. 4. Insert rubber drain. 5. Alcohol dressing. 6. Tetanus antitoxin.—*D. Gunshot or bullet wounds:* 1, 2, same as in *A.* 3. If much bleeding, enlarge opening and tie vessels. 4. If nerve injured, suture nerve. 5. Close wound. 6. Alcohol dressing. 7. Tetanus antitoxin. *Hoag.* 307

## ANNOUNCEMENT.

Meeting of the American Medical Editors' Association.—On June 22d, this Association will meet at the Marlborough-Blenheim Hotel, Atlantic City, N. J., under the presidency of Dr. E. A. Vander Veer, of Albany, N. Y. An unusually attractive programme has been prepared. Among the papers are the following:—

President's Address: E. A. Vander Veer, M.D., Albany, N. Y.

"Relation of the Medical Press to the Cancer Problem," by Mr. Fred'k L. Hoffmann, Statistician of the Prudential Ins. Co., Newark, N. J. (By invitation.)

"The Things that Count in Medical Practice," by H. Edwin Lewis, M.D., New York.

"Ideal National Medical Journal: What It Should Be and What It Should Not Be," by W. J. Robinson, M.D., New York.

"Two Problems of the Organization Journal: the Mediocre Paper and the Editorial Department," by Sarah M. Hobson, M.D., Chicago, Ill.

"Medical Journalism as a Local and as a National Proposition," by Thomas S. Blair, M.D., Harrisburg, Pa.

"Medical Books and Journals," by T. D. Crothers, M.D., Hartford, Conn.

"The Medical Periodical and the Scientific Society," by F. H. Garrison, M.D., Washington, D. C.

"Editorial Experiences," by A. L. Benedict, M.D., Buffalo, N. Y.

"The Special Medical Journal," by A. Bassler, M.D., New York.

"The Medical Profession and Its Influence from a Buying Standpoint," by Joseph MacDonald, Jr., M.D., New York.

"The Preparation of the Original Article and the Editors' Latitude," by E. Franklin Smith, M.D., New York.

"He Among You Who is Without Sin Shall Cast the First Stone," by Erwin Reissmann, M.D., Newark, N. J.

# Book Reviews

Die Malaria nach den neuesten Forschungen. Von Prof. Dr. Angelo Celli, Direktor des hygienischen Institutes der Universität Rom. Zweite deutsche Auflage nach der vierten neubearbeiteten italienischen. Uebersetzt von Anna Fraentzel Celli. Octavo of 294 Pages. With 4 Plates, Partly in Colors, and 121 Text Illustrations. Berlin und Wien: Urban & Schwarzenberg. New York: Rebman Company, 1913. Paper-bound, 16 marks ($4.00).

The first German edition of this book appeared in 1900. Since that time research work upon malaria has been so extensive and productive that a second translation of the modified Italian text became necessary. The work deals, as before, only with the etiology, epidemiology, and prophylaxis of malarial infection, these subjects occupying three successive and

separate parts of the volume. In Part I are taken up in detail the hemosporidia in general, those of lower mammals and man, the various methods of demonstrating the malarial parasites in blood, other diagnostic methods, and the natural history of the mosquito. In Part II are discussed the history of malarial epidemics, the geographic distribution of the disease, the economic losses therefrom, the original sources of malaria, the life of malarial germs outside of the organism, the sources of predisposition and immunity to the disease, the significance of the soil, water, sewage, etc., in this connection, the types of epidemics, etc. In Part III, on prophylaxis, are taken up direct means for destroying the infective agent, means for preventing its invasion of the organism, means directed against the predisposing causes, together with the various measures and rules to be adopted in colonization and home settling. The work closes with an exhaustive table of references to the literature upon malaria in the Roman Campagna. In brief, the work may be said to contain the aggregate of knowledge gleaned from a close study of malaria in the heavily infected districts surrounding Rome, and the conclusions reached on many points cannot fail to prove of interest and value in all lands where the presence of malarial infection indicates the application of preventive measures.

Röntgentiefentherapie. Ihre theoretische Grundlagen, ihre praktische Anwendung und ihre klinische Erfolge. Von Prof. Dr. C. J. Gauss und Dr. H. Lembcke, mit einem Vorwort von Prof. Dr. B. Krönig. Octavo of 332 Pages. With 133 Text Illustrations. Berlin und Wien: Urban & Schwarzenberg. New York: Rebman Company, 1912. Paper-bound, 15 marks ($3.75).

In this work is described the progress made by the authors in recent years in the application of the Röntgen rays to the treatment of uterine fibromyoma and other uterine affections associated with hemorrhage. The extensive experimental work of the authors in relation to this subject is also set forth, and special stress laid on the clinical results obtained during the year 1912, these having been, because of improved technique, superior to those previously attained. Prof. Krönig summarizes his views as to the value of the treatment by stating that it renders possible a cure of hemorrhagic metropathies and of fibromyoma in practically all cases without operative intervention and in a short period of time. By an improved method of multiple exposure even 100 per cent. of cures was recently obtained. These assertions are supported by condensed histories of 205 cases, incorporated in the text. Prof. Krönig considers it likely that sarcoma of the uterus will also prove amenable to deep X-ray treatment in heavy dosage.

The theory and technique of this method are discussed at great length—with illustrative diagrams—in this book. Next follows a shorter section on the practical applications of the method, and, finally, an exposition of the results obtained. The book demands attention on the part of all gynecologists, affording, as it does, detailed information on a new procedure for the treatment of one of the commoner pathologic conditions of women.

Treatment of Tuberculosis. By Albert Robin, M.D., Professor of Clinical Therapeutics at the Paris Faculty of Medicine; Member of the Academy of Medicine. Translated by Léon Blanc, M.D., Physician at Aix-les-Bains, etc., with the assistance of H. de Méric, Surgeon to the French Hospital, London. Octavo of 616 Pages. London: J. & A. Churchill, 1913. Cloth, 18/, net.

Professor Robin, in writing on the treatment of tuberculosis, lays stress on some measures likely to evoke some degree of surprise in the minds of most readers, *e.g.*, remineralization; antiseptic inhalations of allyl iodide and of hydrofluosilicic acid; revulsion by means of blisters, dry cupping, cauterization, etc.; antituberculous sera, and the administration of antimony in certain classes of cases. His advice on remineralization is based on estimations of the mineral residue in various organs in normal and tuberculous persons, the latter showing constantly a more or less marked deficiency in inorganic salts. A writer who advances such unusual therapeutic recommendations as are made in this work clearly lays himself open to a demand for clinical evidence in support thereof, and this the present author does not neglect, though the evidence adduced is at times insufficient to carry conviction. The book does not deal exclusively, however, with the author's original therapeutic deductions, but goes in great detail into climatic treatment, hydrotherapeutics, etc. The treatment of acute phthisis, of the various symptoms in chronic phthisis, and of tuberculosis of the digestive tract, peritoneum, genitourinary system, lymph-nodes, bones, joints, nervous system, special sense organs, etc., is rather comprehensively covered. A special part is devoted to the treatment of tuberculosis according to age and according to other morbid conditions associated. The work may, at least, be said to contain a large number of practical suggestions, some of which will doubtless prove of value on trial. The translation is grammatically correct, but the rendering of individual terms is often poor, as illustrated in such French, but not English, expressions as "pulverisations" (spray), "evolutive accidents," "tincture of canella" (cinnamon), etc. Confirmation is afforded the recent assertions of M. Solis-Cohen regarding the minuteness of the doses of tuberculin causing distinct reaction in some cases, Robin citing

a case in which one-billionth of a milligram brought a "far too marked reaction." Robin limits the initial dose in the average case to one hundred millionth of a milligram.

TREATMENT OF NEURASTHENIA. By Dr. Paul Hartenberg, Paris. Translated by Ernest Playfair, M.B., M.R.C.P. Edinburgh, Glasgow, and London: Henry Frowde and Hodder and Stoughton, 1914.

The subject of neurasthenia deserves far more attention from physicians than it receives. Time was when the convenient, picturesquely descriptive term "nerve-weakness" was applied to any and every instance of exhaustion. Then it was used by many to describe vague mental peculiarities. Finally, the neurologists rose and condemned the phrase, or, rather, the indefensible uses of it. Hence it has fallen into undeserved desuetude. The whole group of asthenias is of vast importance, and no thinking clinician can afford to remain in ignorance of their nature and phenomena. None the less, most do. Perhaps they are not to be altogether blamed, because neurologists themselves have done much to confuse the subject. Instances of neurasthenias present to all practitioners, and they require also to get a clear idea of the rarer forms. Dr. Hartenberg is to be congratulated on the concise, forceful manner in which he has presented the subject. The arrangement is ideal, beginning with chapters on (1) *"What is a Neurasthenic?"* (2) *"Why Does One Become a Neurasthenic?"* followed by a particularly good one on (3) *"The Various Psychonervous Affections which are to be Distinguished from Neurasthenia, although Frequently Occurring in Neurasthenics,"* and (4) *"The Manner in which Every Neurasthenic should be Studied and Examined."*

Up to this point there is little but praise to be given. The author is peculiarly fitted to speak on the psychologic aspects of the disorder, having contributed a book on that one department alone. His language is graceful, concise, and illuminating. We cannot do better than to quote here four conclusions:—

1. "One may consider as neurasthenic every individual habitually suffering from *simple nervous depression* (in order to distinguish it from melancholia, in which the depression, when it exists, is always accompanied by marked moral pain).

2. "The symptoms of neurasthenia are expressions of this nervous asthenia, in the bodily domain taking shape as fatigue, motor weakness, sexual frigidity, etc.; in the psychic domain as loss of power of concentration, of memory, of will, of capacity for work, as depression of spirits, boredom, etc.

"To these signs of insufficiency must be added those of irritability which are their corollary: hyperesthesia, headache, rachialgia, exaggerated reflexes, insomnia, hyperemotivity, etc.

3. "One becomes neurasthenic from two varieties of causes. On the one hand, from exciting causes, such as infectious diseases, chronic visceral disorders, digestive disturbances, overwork, and emotions, which have the effect of exhausting or poisoning the nervous system. On the other hand, predisposing causes, inherent in the constitution, whether it be a case of general debility, or of an arthritic autointoxication reacting upon the nervous system, or whether a congenital stigma indicating degeneracy. All these predisposing causes lead to a diminution of resistance on the part of the nervous system which renders it more vulnerable to exciting causes.

4. "Thus understood, neurasthenia must be considered as the exaggeration of a normal property of the nervous system, fatigability."

When it comes to treatment, the author doubtless is successful, especially acting in accord with his "General Rules," from which we quote:—

"It is . . . indispensable that he who wishes to treat a neurasthenic with the greatest chance of success should have at hand the entire therapeutic arsenal necessary to carry out the treatment in its entirety. He must combine the functions of electrician, masseur, doucheur, psychotherapeutist, and general physician,—a judicious specialization consisting not in the employment of a routine treatment, but much rather in the utilization of every treatment for the same class of patients.

"This personal and direct treatment demands frequent, almost daily, contact between patient and physician, a consequence which is not only advantageous but even indispensable. It is in fact necessary that the patient should be subjected without cessation to medical influence throughout every stage of the cure. The therapeutist must always be at hand to superintend its course, to guide its details, to intervene actively every time that some unforeseen event occurs to derange or discourage the patient."

We in America are of the opinion that we can supply these specifications and do better. Weir Mitchell has taught a group of students the mastery of weakness, physical and mental. Some few of Dr. Hartenberg's recommendations we cannot endorse. It is, however, an admirable book, and deserves wide reading.—J. M. T.

# The General Field

**Conducted by A. G. CRANDALL**

### Law and Order

For centuries the predominating quality of the popular hero has been his firmness and ability to maintain a consistent course. This characteristic no longer seems to be a popular requirement.

This is an age of new adjustments. Figureheads of popular government no longer determine a fixed policy and adhere to it, but listen expectantly for the latest wave of popular sentiment.

Expatriated citizens from Great Britain frequently express their nausea and disgust at the tolerance by the British Government of such a disorderly element as the militants, who are putting in jeopardy the very stability of the government itself, and in this country there are numerous examples of the same disposition to falter and hesitate in conditions where law and order are involved.

Whatever may be the merits of any great public question, there can be no satisfactory settlement under pressure of the mob, and those who seek disorderly methods of bringing a public question to the front must, by all previous standards of government, be regarded as public enemies.

The most vital and essential quality which should be required of any public official is whether or not he will exhibit a position of firmness when brought into contact with public clamor. This does not, of course, imply that a mayor or governor should be controlled by reactionary influences, but it does mean that, whatever the merits of the question in dispute, all tendency to disorder should be rigorously dealt with.

* * *

### One Form of Economy at Least

While this may be an era of extravagance, there is one form of economy which is very manifest.

A medical writer states that twenty years ago the average width of skirts worn by 98 young women was 13 ft. 6 in. This, of course, required a proportionately liberal allowance of underskirts.

Although reckless expenditure is widespread, no one can possibly accuse women of the present day of lavishness in the consumption of cloth. At no time was Spartan simplicity in this respect more conspicuous.

But perhaps the most astounding evidence of all of common sense in woman's clothing is the now widely prevailing fashion of the large, natural waist, and, while the decree of fashion is usually inexorable, it is hardly to be expected that women will ever again consent to make themselves ridiculous by the combination of ultravoluminous skirts and an abnormally constricted waist line.

* * *

### Fakes and Fakirs

Thoroughly organized news agencies are able to assemble day by day a varied assortment of depressing tales in which the unsuspecting are victimized by their more crafty associates. This never-ending procession of incidents sometimes leads to very pessi-

mistic conclusions. However, human nature is not materially different from one age to another. Jacob, patriarch of Bible history, pulled off a holdup scheme on his brother Esau that is not frequently surpassed in audacity at the present time. And Jacob in turn was also victimized by his father-in-law, who succeeded in palming off on the contriving Jacob his defective daughter in the place of her sister, for the possession of whom Jacob had served an apprenticeship of seven years.

In recognition of this ineradicable weakness of human nature, there was enunciated centuries ago the oft-quoted rule of commerce: "*Caveat emptor,*" "Let the buyer beware."

The fact that at the present day a more enlightened code of ethics pervades the commercial atmosphere, and an increasing number of transactions are accompanied with the guarantee of satisfaction or money refunded, indicates that fakes and fakers will be gradually eliminated from business life.

* * *

**The Iron Constitution**

For a century or two it has been the custom among the ignorant populace to speak of a strong man or woman as possessing an "iron constitution." The teachings of physiology show that this was no figment of the imagination.

Owing to the high price of eggs and the commercial methods of preparing wheat flour, the average consumer is not now regarded as getting a square deal in the matter of the physiologic iron intake. It, therefore, becomes necessary that this useful metal be supplied in another form.

Physiologists have agreed that lettuce and spinach provide a maximum amount of iron with a minimum amount of discomfort to the individual. Yet with many, these useful articles of food are not popular. Furthermore, their high price at most seasons of the year stands in the way of their being utilized by the average family.

It is evident that a campaign of education should be begun with a view of popularizing lettuce and spinach and placing them within easier reach of the masses. If there was ever a time when men and women of iron mold were needed, it is at present.

* * *

**An Imposition upon the Public**

The eagerness with which the metropolitan newspaper seeks for readable copy turns the light of publicity upon many individuals whose personal importance is hardly worth a four-line personal.

A person named Sinclair has had his craving for notoriety altogether too much gratified of late. A great deal that is annoying happens that would not occur if it were not that certain individuals will go to almost any length to see their names headlined in the newspapers.

Whenever a suggestion is made pertaining to a restriction of such sensationalism, the howl immediately goes up of a censored press, which, of course, no one wants; but it seems unfortunate that there should not be a greater sense of responsibility to the public in many a publication office.

Just how a publisher may construe it to be a dignified act to give prominent space to the antics of those whose interest in the causes they advo-

cate would speedily wane but for the advertising they get, is hard to understand.

* * *

### Poverty and Opulence Among the Indians

Sunshine and shadow have been conspicuous in the recent history of the American Indian. In the southwest many Indian families have become enormously wealthy through the appreciation of their land allotments; in other sections extreme poverty is the rule, with a concomitant high death rate, largely owing to tuberculosis, the result of bad environment and meager dietary.

The management of the Indian tribes has always been a scandal, largely through the apparent indifference of successive members of Congress who have never seemed to consider it worth while to really inform themselves about the actual conditions.

Medical missionaries are probably as badly needed among American Indians as they are in China or India. The process of adaptation to civilized customs is not a serious problem as compared with numerous other race complications, and the inhabitants of reservations are well worth looking after, even if considered only from the most material motives.

* * *

### Treeless Streets

With the "good roads movement" in full blast and a pervading civic pride in the improvement of towns and cities, it is a little surprising that the most inexpensive system of ornamentation which could be devised, viz., shade trees, should be practically overlooked in the various schemes of urban improvement.

The fact is, during the last twenty years of unusual development, there seems to have been an abnormal antipathy to trees on the part of city authorities everywhere. Occasionally there have been half-hearted attempts to plant trees, but they have been placed in such constricted areas as to be incapable of growth and, as a rule, have been left unprotected.

The benefits conferred by liberal growth of shade trees are out of all proportion to the cost, and it is to be hoped that before long the civic spirit of the average city will have become sufficiently developed to provide for the planting of trees in city streets under conditions that will permit them to develop normally.

* * *

### Faith vs. Demonstration

It is a question whether the public is benefited by certain attempts to rationalize all methods of cure. Medical writers become indignant in their denunciation of the family doctor who will not demonstrate the presence of a tuberculous infection of the lungs in its earliest incipient stage. Column after column of sarcasm is poured upon physicians who still prescribe lithia waters, or who fail to explode the faith of their patients in some old remedy which the family physician in question may have prescribed years ago, prior to these modern days of skepticism.

It is going to be a little hard to uproot the faith cure from the professional routine. How many times a year does it probably happen that the family doctor calls around upon some depressed patient who has gradually been accumulating a burden of apprehension and misgiving, and after a

few minutes' chat goes away, apparently taking the burden with him?

When a doctor has taken charge of a young family and sees the children gradually reach maturity, and been in confidential relations with the parents and noted the various idiosyncrasies of the different members of the family, he is about as reluctant to try, by extraordinary methods, to locate some tuberculous germ and triumphantly announce his discovery as the father or mother would be. If he is suspicious he hopes by solicitous care and encouragement and an unfailing atmosphere of cheerfulness to lift the patient out of the menacing condition of physical depression and not have him dismayed and stricken by some crushing announcement.

If the family doctor prescribes lithia water under the conditions for which it was at first announced to be useful, and has seen benefits following its use, he is not overwhelmingly impressed with the chemical conclusion that it could not by any possible means possess any real therapeutic value. There is often quite a difference between theory and practice.

* * *

**Fame**

Considerable glory has now been achieved by Mr. Lincoln Beachy and others who have dared to undertake gymnastic exploits suspended in the atmosphere on an aëroplane. At present, however, the ranks of this profession are not seriously crowded.

There are other much safer ways of acquiring not only great fame, but greater emolument. Realizing that "there is a tide in the affairs of men," etc., a certain young married couple have advanced their way to the dizziest heights of not only fame, but fortune. Days, nights, and Sundays this young couple are studying how they may devise new and more fantastic forms of dancing, which they know by experience will be eagerly taken up, and at least experimented with, by a large number of admirers.

Fame would, therefore, seem to denote the possession of the ability to take advantage of the psychologic moment.

* * *

**As to Public Documents**

The complaint is made that an ungrateful people fails to take advantage of a great multitude of valuable suggestions sent out as public documents from Washington.

There are a few basic facts which could at present be circulated to excellent advantage, and which would constitute a very useful preparation for the present form of instruction.

It would not cost a great deal of money to reprint and distribute Poor Richard's Almanac. The homely truths contained in this masterpiece of Benjamin Franklin's are at the present time largely lost sight of. "A fat kitchen makes a lean will." This one aphorism out of many other epigrammatic statements tells us that personal extravagance, now almost universal, is inevitably followed by financial anxiety in the future.

It is not the necessities of life, but the incidentals, which use up the average income.

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**Bulgarian Bacillus Mulford** is supplied in packages containing 20 tubes (20 doses), each package stamped with an expiration date to insure active living cultures.

It is important that fresh cultures be furnished; otherwise their efficiency is lessened and the results will be less satisfactory.

The Bulgarian Bacillus must be kept in a cool place, preferably the ice chest or refrigerator, to maintain activity.

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# Notes and Comments

F. A. DAVIS COMPANY, Publishers A. G. CRANDALL, Manager

## A NOVEL EDUCATIONAL EXHIBIT AT ATLANTIC CITY.

Motion Pictures to be Used as a Means of Demonstrating to the Profession the Methods Used for Producing Antitoxins, Bacterins, Vaccines, and Curative Serum.

At the meeting of the American Medical Association, to be held in Atlantic City, June 22d to 26th, the H. K. Mulford Company will exhibit motion-picture films, made by them at great expense, showing the different processes employed in the production of biologic products.

This will be the first time to our knowledge that motion-picture films have been used for showing the processes used in the production of biologic products.

Not only do the films show the laboratory methods used, but also the actual application of these preparations from the clinician's standpoint.

A short description is thrown on the screen before each process is shown, describing the pictures, so that they bear their own explanation.

Because of the fact that no suitable space could be secured in the exhibit hall, the H. K. Mulford Company have arranged, through the courtesy of the Chalfonte, to show these pictures in the auditorium on the main floor of this hotel. These films will be exhibited several times each day and arrangements are being made so they will not conflict with the general or special sessions of the meeting.

Next to visiting the Mulford laboratories at Glenolden, which is a trip that every physician should avail himself of, an inspection of these films will convey a clear idea of what it means to provide adequate equipment for the production of the various biologic products, particularly Diphtheria and Tetanus Antitoxin, Typho-Bacterin and preparations for the prophylaxis and treatment of infectious and contagious diseases.

## THE DELICATE SCHOOL GIRL.

Even the most robust and generally healthy children show the deleterious results of the modern system of educational "forcing" that prevails in most of our larger cities. The child that starts the school year in excellent physical condition, after the freedom and fresh air of the summer vacation, in many instances, becomes nervous, fidgety, and more or less anemic, as the term progresses, as the combined result of mental strain and physical confinement in overheated, poorly ventilated school rooms. How much more likely is such a result in the case of the delicate, high-strung, sensitively organized, adolescent girl? It is certainly a great mistake to allow such a girl to continue under high mental pressure, at the expense of her physical health and well being, and every available means should be resorted to to conserve the vitality and prevent a nervous breakdown. Regularity of meals, plenty of sleep, out-of-door exercise without fatigue, open windows at night, and plenty of nutritious food should all be supplied. Just as soon as an anemic pallor is noticeable, it is a good plan to order Pepto-Mangan (Gude) for a week or two, or as long as necessary to bring about an improvement in the blood state, and a restoration of color to the skin and visible mucous membranes. This efficient hem-

(CONTINUED ON ADVERTISING PAGE 33.)


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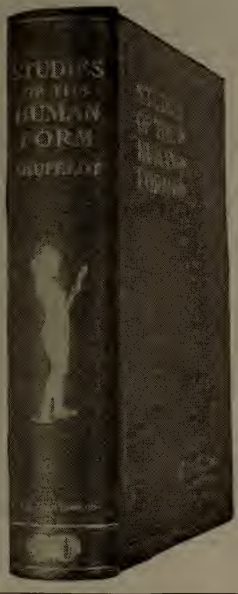


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atinic is especially serviceable in such cases, because it does not in the least interfere with the digestion nor induce a constipated habit.

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NO SERIAL NUMBERS AFTER APRIL, 1915.

The information is given out that at the present time 58,816 serial numbers accompanied by the legend, "Guaranteed, etc., under the Food and Drugs Act, June 30, 1906," are now recorded with the Federal Government.

In view of the fact that these guaranties have been attributed by many consumers to mean that the merits of the product were certified to by the Government, it has been decided to prohibit the use of this legend upon packages after the above-mentioned date.

The certificate may be printed or stamped upon the invoice sent to a dealer, but is not to be apparent to the consumer. It may be well questioned whether this modification of the original ruling will not open the way for the letting down of the standards of purity of a great number of commodities intended to be covered by the provisions of this act.

---

GOVERNMENT WARNING.

The U. S. Department of Agriculture has issued a warning against the use of an alleged hog cholera cure which is being promoted under the name Benetol. The warning proceeds to state that the impression is being conveyed by literature sent out by the manufacturers of this remedy that the Department of Agriculture has endorsed it, which statement is vigorously denied.

The losses to farmers resulting from the ravages of hog cholera are a very serious matter, and plausibly worded circular matter indicating that the remedy had the endorsement of the U. S. Government might very likely make a hit with breeders of hogs.

The necessarily high prices of all pork products naturally create a common interest in this problem of the farmer.

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